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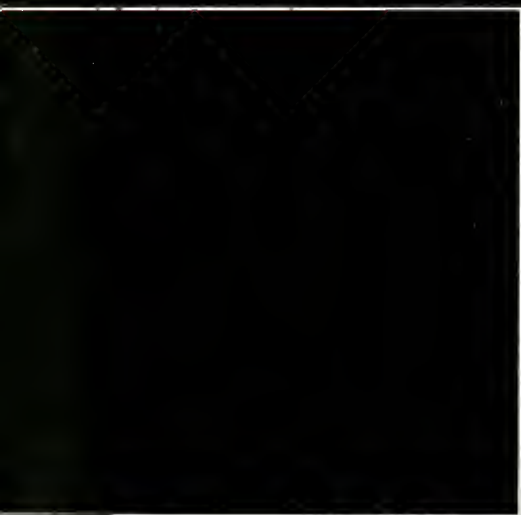
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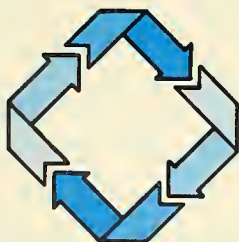
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THE COVER

The leaf in the center of the front cover represents the Wye Oak, Maryland's Official State Tree. The photographs symbolize the essence of this Comprehensive Plan — providing abundant and quality outdoor recreation and open space opportunities to Maryland's rapidly growing population.

Maryland. State Planning Dept.
Publication.

MARYLAND OUTDOOR RECREATION AND OPEN SPACE
COMPREHENSIVE PLAN
PHASE II

"Our environment is as much a part of our heritage as our culture. We must nurture it, and protect it, so that it can be passed on to coming generations."

Governor Marvin Mandel



The State of Maryland
Honorable Marvin Mandel, Governor

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Legal Authority For Plan Preparation

The Comprehensive Plan, Phase II of the Maryland Outdoor Recreation and Open Space Plan, was prepared under the authority granted to the Maryland Department of State Planning, by Article 88C of the Annotated Code of Maryland which empowers the Department of State Planning to . . . "prepare, recommend and keep up-to-date a balanced, integrated program for the development and effective employment of the natural and other resources of the State, in order to promote the health, safety and general welfare of its citizens."

Prepared by:
Urban Research & Development Corporation
Main Office - Bethlehem, Pennsylvania



MARVIN MANDEL
GOVERNOR

STATE OF MARYLAND
EXECUTIVE DEPARTMENT
ANNAPOLIS, MARYLAND 21404

November 1972

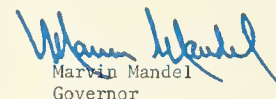
To the Citizens of Maryland:

Many changes are occurring in our State to alter our environment and increase our desire for open spaces and recreational experiences--expanding population, more automobiles, and increasing leisure time are prime examples. These factors indicate the need for additional recreation facilities, greater accessibility to existing areas, and a more equitable distribution of open space and parklands. While Maryland's open spaces and potential recreation lands are gradually being preempted by metropolitan growth, our increasingly urban society demands that these resources be made available nearer the major concentrations of people. With limited funds, and suitable areas rapidly disappearing, it became imperative that overall Statewide guidelines be developed to insure optimum use of our fiscal, administrative, and natural resources. In addressing these needs, the Department of State Planning, by executive order, was given the responsibility for development of goals and policies for outdoor recreation and open space. The culmination of this effort will be the State Outdoor Recreation and Open Space Plan which is being carried out in three phases and will represent the open space element of the State Development Plan.

In the year since Maryland published Phase I, the Outdoor Recreation and Open Space Concept Plan, over 12,000 acres of vital recreation and open space lands have been added to the public domain. These lands, acquired with Federal, State and local funds, have been coordinated with the recommendations and policies of the Concept Plan and have provided the first major step towards implementation of a Statewide framework for open space and outdoor recreation.

With this groundwork laid, I am pleased to present the second phase of this planning project, the Comprehensive Plan. This document, which refines and expands the goals and policies formulated in the Concept Plan, reaffirms Maryland's continuing dedication to provide a quality environment for all of its citizens.

Sincerely,


Marvin Mandel
Governor

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SUMMARY

COMPREHENSIVE OUTDOOR RECREATION & OPEN SPACE PLAN

The Comprehensive Outdoor Recreation & Open Space Plan is based on the identification of unique natural features, extensive regional analysis of recreation needs and projected future demands. It reflects a recommended open space framework throughout Maryland and suggests actions for meeting the State's outdoor recreation and open space needs.

STATEWIDE POLICIES & RECOMMENDATIONS

Preliminary statewide policies were recommended in Phase I, the Concept Plan, to guide the State, other governmental agencies and private enterprise in the provision of open space and outdoor recreation areas. People in the regions expressed agreement with nearly every policy developed in the Concept Plan.

Concept Plan policies were the foundation for the development of the Comprehensive Plan. The following policies are set forth as the basis for open space and outdoor recreation decisions. Use of these statewide policies will help unify outdoor recreation and open space planning, programming, acquisition and development throughout Maryland.

- PLAN AND LOCATE OPEN SPACE AND OUTDOOR RECREATION AREAS IN HARMONY WITH PEOPLE'S NEEDS.
- PROVIDE THE MAXIMUM POSSIBLE NUMBER OF OUTDOOR RECREATION OPPORTUNITIES.
- RESPECT THE NATURAL CHARACTERISTICS OF LAND AND WATER.
- EMPHASIZE THE PRESERVATION OF UNUSUAL PLANT AND ANIMAL FORMS AND EXTRAORDINARY HABITATS.
- USE A VARIETY OF METHODS TO PRESERVE AND ACQUIRE OPEN SPACE LANDS.

- PROVIDE SCENIC ROADS AND TRAILS.
- ENCOURAGE A PARTNERSHIP BETWEEN PRIVATE ENTERPRISE AND GOVERNMENT TO CONSERVE AND DEVELOP NATURAL RESOURCES AND TO PROVIDE PUBLIC RECREATIONAL FACILITIES.
- IMPROVE THE ENVIRONMENT BY UTILIZING NATURAL FEATURES TO SHAPE URBAN DEVELOPMENT.
- PLAN AND LOCATE OUTDOOR RECREATION AND OPEN SPACE AREAS IN A COMPREHENSIVE MANNER.

These policies are the basis of the Plan which identifies a statewide system of three types of significant recreation and open space areas:

- Activity Centers, which are intensively developed recreation areas.
- Limited Use Areas, which are usually natural resource based where recreation activities must be carefully selected because of the area's delicate environment.
- Conservation Areas, dominated by unique natural resources where limited recreation activities can occur which do not disturb the environment.

The Plan indicates which of these areas should receive particular emphasis in future acquisition and development programs. A synopsis of the significant natural resources, existing major recreation facilities, land development trends, recreation demands and other major factors that molded the State Comprehensive Plan within each of the State's seven planning regions is provided to make the plan especially useful to these regions.

Implementation techniques, considered most pertinent in accomplishing the policies and recommendations of the Plan and for carrying out appropriate responsibilities for each level of government and private enterprise, are discussed.

BACKGROUND

The Maryland Outdoor Recreation and Open Space Program is being undertaken in three phases which will lead to the development of a Comprehensive Plan and an implementation program. The Program is being phased because of the conviction that a Plan must be evolved rather than produced in one major effort.

PHASE I CONCEPT PLAN (1970)

- Designated areas that offer potential for open space and outdoor recreation.
- Provided statewide policies and an open space and outdoor recreation framework that government, private enterprise and others can use to help determine where open space and recreation facilities should be located.
- Provided local government and others with a basis for review and comment prior to Phase II.

PHASE II COMPREHENSIVE OUTDOOR RECREATION & OPEN SPACE PLAN (1972)

- Provides a thorough understanding of open space and outdoor recreation needs throughout the State and in each region.
- Provides up-to-date information from census data, a statewide outdoor recreation inventory and special studies, for an extensive evaluation of problems and solutions.
- Provides detailed statewide and regional recommendations for areas to be preserved as open space and areas to be developed for recreation.
- Provides a schedule for State land acquisition and development.
- Provides generalized State and regional, legal, fiscal and administrative guidelines to help implement the policies and recommendations of the Comprehensive Outdoor Recreation and Open Space Plan.

PHASE III ACTION PLAN (1973)

- Will provide an implementation program, including detailed State and regional acquisition and development schedules.
- Will propose work program outlines for special studies.
- Will review current policies and criteria including standards and responsibilities.
- Will clarify the relationship of outdoor recreation and open space planning to other Statewide planning activities.
- Will recommend procedures for the annual audit of recreational activity at all levels of government.
- Will summarize the State Outdoor Recreation and Open Space Plan and process.

REGIONAL MEETINGS—INPUT TO THE COMPREHENSIVE PLAN

The Concept Plan prepared in Phase I was used as a document for review of findings, policies and recommendations by government and private enterprise. The Maryland Department of State Planning and its consultant, Urban Research & Development Corporation, in cooperation with the Department of Natural Resources, formally presented the Concept Plan to the local agencies within each of the State's regions, to citizen's groups and to various State Departments.

Six major questions posed to each region provided the basis for discussion on the Concept Plan. Table 1 summarizes answers to questions and the most significant responses to these questions arising from the Phase I Concept Plan regional meetings. The responses provided guidelines for Concept Plan adjustments and for the preparation of Phases II and III.

The Concept Plan meetings led to a desire on the part of the regions and the State to meet again to review and comment on the Comprehensive Outdoor Recreation and Open Space Plan before final publication; these subsequent meetings were held, indicating the mutual interest and dialogue which have developed between the State and the regions concerning open space and outdoor recreation.

The policy refinements and the insights regarding open space and outdoor recreation needs resulting from regional meetings provided a basis for more detailed planning and the preparation of a State Comprehensive Outdoor Recreation and Open Space Plan that is sensitive to regional, county and municipal needs.



TABLE 1 MAJOR REGIONAL RESPONSES TO PHASE I CONCEPT PLAN

QUESTIONS	WESTERN MARYLAND—FREDERICK	BALTIMORE
<p>Natural Features Approach</p> <p>1. How would you improve upon the natural features approach used in the Concept Plan to plan for areas in your Region to be preserved as open space or to be used for outdoor recreation?</p>	<p>Significant natural features should be used as a basis for planning open space preservation areas and areas for outdoor recreation facilities, particularly the Region's ridges, slopes and stream valleys.</p>	<p>Agreed with using natural features as a basis for all land use planning, including open space and outdoor recreation areas. Wanted to see the mapping of all the physiographic factors used to help determine areas most suitable for open space preservation and outdoor recreation development, which would be done in Phase II.</p> <p>Open space and outdoor recreation are so closely related that they can't be separated.</p> <p>Natural features must help determine the kinds of recreation facilities that should be developed.</p>
<p>Statewide and Regional Policies and Recommendations</p> <p>2. How would you expand upon the statewide and regional policies and recommendations in the Plan to provide meaningful guidelines for government and private enterprise to use in making decisions regarding the provision of appropriate open space areas and outdoor recreation facilities?</p>	<p>General agreement, but add a statewide policy to encourage multi-governmental cooperation or a regional approach for decision-making and for problem solving.</p> <p>The regional recommendation of de-emphasizing large land acquisitions other than unique primitive areas, natural and scenic resources appears to be in conflict with the intent of the State's Program Open Space.</p> <p>Particular interest was indicated toward private enterprise, county and municipal agencies leasing and developing unused public lands for needed local outdoor recreation facilities and programs.</p>	<p>Improve cooperation and coordination between State, Regional and Local agencies in planning and developing recreation facilities.</p> <p>Revise Program Open Space formula of requiring 75 percent of monies to be spent first for land acquisition before the remaining 25 percent can be spent on development. Recreation facilities development should be emphasized more through Program Open Space.*</p> <p>The Region's counties want a detailed understanding of how the statewide and regional policies and recommendations should be implemented.</p> <p>The preservation and development of the Patapsco, the Severn and Patuxent are important as major regional recreation areas.</p> <p>Site plans should be developed for the existing reservoirs to show how they can be used for multi-purpose recreational use.</p> <p>Locate future large major recreation areas much closer than two hours commuting time from major urban areas. Recreation land acquisition for day-to-day oriented facilities should be emphasized in areas within fifteen to thirty minutes from major urban centers. Otherwise, too many recreation opportunities will be lost.</p> <p>Provide write-offs and other financial benefits to industry or commerce for creating recreation land in conjunction with their construction of housing, industrial or commercial developments.</p>
<p>Urban Recreation</p> <p>3. What is your opinion about the Concept Plan's significant policy of providing more open space and outdoor recreation facilities within easy access to the State's urban areas?</p>	<p>Agree that more open space areas and outdoor recreation facilities must be provided within easy access to the State's urban areas.</p> <p>Providing space and facilities in and around the Region's urban areas is viewed as a partial answer to meeting recreational needs, but recreation programs shaped through active citizen involvement are viewed just as essential.</p>	<p>More parks and open space should be provided in the urbanized areas of the State.</p> <p>The most significant demand for recreation is within a half hour of home.</p>
<p>Recreation Needs</p> <p>4. In your opinion, what kinds of outdoor recreation facilities are needed to meet the demand for outdoor recreation in your Region?</p>	<p>More facilities are needed for boating, camping, hiking and playing outdoor sports.</p> <p>The individual counties are uncertain about the kinds of activities wanted by their residents.</p>	<p>The state should rely on local agencies to determine what the recreation needs are for an area.</p> <p>A feasibility study should be undertaken to determine not only recreation needs, but the characteristics and use potential of land being considered for recreation development.</p>
<p>Recreation Demand Projections</p> <p>5. Do the recreation demand projections for your Region depict what you consider to be the magnitude of existing and anticipated demand for various recreation activities?</p>	<p>Data on out-of-state visitors and visitors from other counties would have indicated a more realistic demand picture for the region.</p> <p>Interest in the specific methodology that was used to project demand was expressed, especially regarding distances that people are willing to travel to participate in various recreation activities such as camping, fishing and skiing.</p>	<p>The inclusion of out-of-state visitor data and other visitor data will provide a somewhat more realistic picture of real demand for recreation facilities in the Baltimore Region.</p>
<p>State Responsibility</p> <p>6. What, in your opinion, should be the State's primary role in providing future open space and outdoor recreation areas?</p>	<p>The State's primary role in providing future open space and outdoor recreation areas was viewed as follows:</p> <ul style="list-style-type: none"> — To provide overall guidelines and objectives concerning acquisition and development. — To provide outdoor recreation areas oriented around features of statewide or regional interest. — To provide major camping facilities. — To preserve areas having statewide or national significance. — To provide funds and incentive for local regional governments to acquire and develop recreation areas and opportunities for the citizens within their immediate jurisdiction. — To provide an opportunity for private enterprise and County or municipal agencies to lease and develop undeveloped public lands for needed local outdoor recreation programs. 	<p>Provide financial aid for capital construction, maintenance costs and operational costs.</p> <p>Determine what roles various levels of government and private enterprise should play in carrying out the planning, acquisition, development and maintenance of future recreation areas.</p> <p>Expend State Park acquisition program evenly throughout the region to avoid an extensive concentration of State-owned land in a county which would tend to de-emphasize the need for county and municipal parks and programs. The State should avoid giving any local subdivision a justification for saying "Let the State do it".</p>

*revised legislation enacted June 1, 1972

SUBURBAN WASHINGTON — MARYLAND	SOUTHERN MARYLAND	UPPER & LOWER EASTERN SHORE
<p>Significant natural features must be used to plan for areas to be preserved in open space or for areas to be developed for outdoor recreation purposes. The natural features approach also reinforces the region's wedges and corridor plan.</p> <p>The importance of using natural features in open space and recreation planning is signified by the large number of stream valley parks in the Region.</p> <p>Cluster development and mandatory land dedication regulations, which are used throughout the Region, emphasize the preservation of significant natural features.</p> <p>Open space and outdoor recreation should be specifically defined since they are so closely related.</p>	<p>Agree with using significant natural features as a primary means of planning for areas to be preserved in open space and areas to be developed for recreation purposes.</p> <p>The lands along the Wicomico, Potomac and Patuxent Rivers and Chesapeake Bay offer the greatest recreation potential.</p>	<p>A natural features approach is a rational way to plan for open space preservation and outdoor recreation areas. The likelihood of acquiring large amounts of the Eastern Shore's potentially excellent recreation land along major waterways was questioned because of existing private ownership.</p>
<p>The policy statements were considered very germane and were urged to be adopted with some clarifications.</p> <p>Both counties strongly encouraged close cooperation and coordination between the State and the Region in planning and developing future State facilities in the Region.</p> <p>Encouraged more State participation in open space preservation and outdoor recreation development in the region, especially along the Patuxent River.</p> <p>A policy of how the suburban counties should meet the recreation needs of visitors from the District of Columbia is unresolved, although State participation is viewed as essential to help meet the demand.</p> <p>Revise Program Open Space formula of 75 percent of funding being expended for land acquisition before the remaining 25 percent can be spent for development to permit a greater emphasis on land development; specific percentage revisions were not recommended.</p> <p>Policies should recognize the Suburban Washington Region as being the primary growth area in the State — 50 percent of the State's growth during the last ten years occurred in the Region and approximately 30 percent of the State's population resides in the Region in 1970.</p>	<p>General agreement was expressed toward the statewide and regional policies and recommendations.</p>	<p>Acquire land for public landings with adequate overnight accommodations.</p> <p>Utilize heavily wooded areas for recreation areas, with the development of camping facilities considered a high priority because of the popularity of this activity.</p> <p>Revise local funding requirements under Program Open Space because the counties are unable to provide the required local funding under the existing legislation and therefore are unable to participate fully in available open space and recreation programs.</p> <p>Counties should develop small playgrounds, parks and other recreation facilities for resident use.</p> <p>Provide a few large, well-maintained wayside park areas along highways instead of numerous small, poorly-maintained areas.</p>
<p>Complete agreement exists about providing more parks where the people are, with the State, either through providing more funding to the Region or developing State facilities, participating far more in the provision of outdoor recreation areas than it has in the past.</p> <p>The Maryland National Capitol Park and Planning Commission has acquired 26,000 acres of public recreation lands to serve the recreation needs of the Region. Five regional parks are within four to nine miles of the District of Columbia line.</p> <p>Built-up portions of suburban areas must use such concepts as plazas, pedestrian walkways, rooftop recreation areas, vest pocket parks and the like to meet recreation needs in the more intensively developed areas.</p>	<p>Agreement was expressed that more parks should be located close to urban areas.</p>	<p>Agree that parks should be located not only where most of the people are, but also where most people go because of unique natural features. The Region, because of its ocean front and many waterways, provides an appealing environment for hundreds of thousands of residents from Maryland and elsewhere.</p>
<p>Local playground space is needed both in the built-up and suburbanizing areas of the Region. A large part of the land in the suburbanizing areas is now being provided through cluster development and mandatory land dedication regulations. In built-up areas, MNCPPC is acquiring land.</p> <p>Large regional facilities are also needed, which MNCPPC will include in future recreation land acquisition. The regional park system would ring the Region outside the Beltway.</p>	<p>The greatest recreation demands are for fishing, boating and swimming, with a discernable trend toward buying and building second homes in the Region, especially along waterfront property.</p>	<p>The greatest recreation demands are for hunting, fishing and boating. Since these activities attract a large number of persons from outside the region, a fee should be charged for the use of facilities.</p> <p>Virtually all public landings are inadequate, which means that existing ones should be expanded and new ones planned and developed.</p>
<p>The population projections that were used to help derive recreation demand in the Region were considered too low. Visitor data from out-of-state and other regions, if they had been available, would have provided a more realistic assessment of real and projected demand.</p>	<p>Lack of visitor data from other regions, in particular, and out-of-state data preclude an accurate assessment of true recreation demand now and in the future.</p>	<p>The demand projections inaccurately reflect true recreation demand because out-of-state and out-of-region visitor data were unavailable.</p>
<p>The State should help the Region provide large regional parks.</p> <p>The State should take an active role in acquiring land along the Patuxent River for open space preservation and outdoor recreation development.</p>	<p>Provide a set of guidelines to assist all levels of government and private enterprise in the coordination of planning, acquiring, developing and managing future recreation areas.</p>	<p>Provide more funding to help counties and municipalities acquire and develop small recreation areas for residents.</p> <p>Heavily participate, both technically and financially, to expand existing facilities or acquire and develop new recreation facilities that will primarily serve the recreation demand of persons from outside the Region.</p>

PLAN FORMULATION PROCESS

Six major steps were taken in developing the Comprehensive Outdoor Recreation and Open Space Plan. They are summarized below.

1. IDENTIFICATION AND ANALYSIS OF NATURAL FEATURES

The natural features approach to planning, as used in the Concept Plan and further refined in this phase, identified the areas within Maryland which have a high concentration of natural resources conducive to open space preservation and outdoor recreation development. The framework in the Comprehensive Plan differs from the Concept Plan's as a result of an updated and more detailed statewide natural features inventory, described and depicted in parts of this report. A statewide inventory of public and private recreation facilities was also incorporated into the analysis. In addition, major areas of outstanding or unique geologic, ecologic, historic and cultural features were identified.

The following factors were plotted and analyzed at the State and regional levels to determine the basis for the outdoor recreation and open space framework of the Comprehensive Plan:

- urban growth pattern
- unique geologic, ecologic, historic and cultural features
- soil characteristics most conducive to recreation and open space
- steep slopes
- major forests and woodlands
- streams, rivers, wetlands, lakes, ponds, Chesapeake Bay and related waters
- fish and wildlife habitats

2. PROJECTION AND ANALYSIS OF OUTDOOR RECREATION AND OPEN SPACE NEEDS

State and regional activity-demand projections were developed and compared to data from the Statewide inventory of existing facilities to determine areas of deficiency. Information and projections of current and future needs were then compared with design criteria to determine land and facility requirements for a variety of recreational activities.

3. SELECTION OF OUTDOOR RECREATION AND OPEN SPACE AREAS

Outdoor recreation and open space areas, within the natural

THE PLAN FORMULATION PROCESS:



THE PLAN ...

features framework, were identified throughout the State. Each area selected was analyzed to determine its compatibility with the projected activity demands. County and regional facilities were included if they coincided with the State open space framework and would serve a regional population. General intensity of use and primary activities were identified for each area.

4. SELECTION OF "AREAS OF EMPHASIS" — PRIORITIES FOR OUTDOOR RECREATION AND OPEN SPACE

The selected areas were analyzed in light of the demand studies and population information to further identify those which should be considered as "areas of emphasis," or of highest priority. These areas were then presented for review by State and local authorities.

5. STATE AND LOCAL REVIEW OF PROPOSED OUTDOOR RECREATION AND OPEN SPACE AREAS

A draft of the Comprehensive Plan was prepared for review by State agencies. Regional meetings were held throughout the State to describe the findings, to present the proposed plan, and to solicit local comment. The results of these meetings modified the draft plan.

6. DEVELOPMENT OF IMPLEMENTATION PROCEDURES

To insure that future planning efforts conform to the policies and recommendations of the State Comprehensive Plan, a series of guidelines for future action was developed. Various implementation techniques were studied and recommendations were made as to their most appropriate uses. Responsibilities of Federal, State and local governments were delineated, and sources of funding were identified.

7. CONTINUING PLANNING AND UPDATING

The Comprehensive Plan is a guide for making decisions by placing outdoor recreation and open space proposals in a long-range, comprehensive perspective. The Plan will be reviewed periodically and, when necessary, modified or amended. This review procedure, which will be under the auspices of the Maryland Department of State Planning, will insure that the Plan reflects current trends, new information and changing State needs. Additional data from special studies and detailed investigations undertaken each year by the State will provide another basis for revisions to the Comprehensive Plan.

4

"PRIORITY" AREA SELECTION

- Areas of emphasis for meeting demand and responsibilities

5

FEDERAL, STATE AND LOCAL REVIEW

- Agency and regional meetings
- Finalization

6

IMPLEMENTATION

- Implementation techniques & responsibilities
- Funding requirements
- Acquisition and development

• • CONTINUING PLANNING AND UP-DATING

*"The face and character of our country are determined
by what we do with America and its resources . . ."*
Thomas Jefferson



NATURAL RESOURCES

NATURAL RESOURCES — A FRAMEWORK FOR OPEN SPACE AND OUTDOOR RECREATION PLANNING

Only after the characteristics of topography, vegetation, soils, water courses and other natural features are recognized and understood can sound decisions be made regarding the use of land for recreation and urban development. This "natural features" approach underpins the Comprehensive Outdoor Recreation and Open Space Plan.

The method used to determine the areas most appropriate for open space use can be considered a hybrid of different ecological analysis techniques. Very few studies have undertaken a true ecological analysis which considers the biological relationships of organisms to the environment. Rather, most studies, including this Plan, are based upon the apparent interrelationships among water, land and plant forms.

The approach taken in this phase of the study can be divided into six steps:

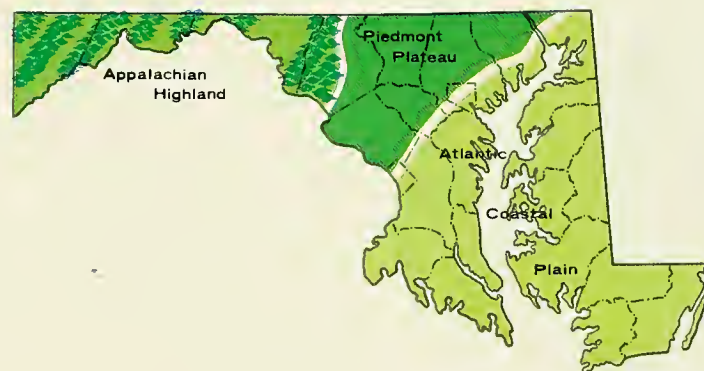
- Collection and evaluation of data on all major natural features that serve an open space function and are worthy of preservation.
- Consideration and identification of urban areas, villages, transportation corridors and historic areas.
- Selection, analysis, and mapping of key natural features on a statewide basis.
- Combination and mapping of closely related natural features.
- Correlation of each of the natural features groupings to disclose any pattern of reinforcement.
- Identification and evaluation of high concentrations of natural features.

NATURAL RESOURCES — A STATEWIDE PERSPECTIVE PHYSIOGRAPHY & GEOLOGY

Maryland has three physiographic provinces which provide a wide variety of significant natural forms. Geologic conditions cause the subtle and dramatic changes in landscape that influence open space and recreation patterns throughout the State. Maryland is characterized by low, level land and an intricate system of waterways in the Atlantic Coastal Plain on the Eastern Shore. The land rises across the rolling Piedmont, and rises even more dramatically across the parallel ridges and valleys of the Appalachian Province in Western Maryland.

Coastal Plain Province — The Coastal Plain in Maryland is divided by the Chesapeake Bay into the eastern and western shores — the former resembling a nearly level plain, and the latter more rolling. These two areas cover nearly 5,000 square miles, approximately one-half of the State.

Gently seaward-dipping beds of unconsolidated sand and clay with smaller amounts of gravel and marl underlie the Coastal Plain. These beds, composed chiefly of material washed from the Appalachian Mountains during millions of years of erosion, extend seaward from the

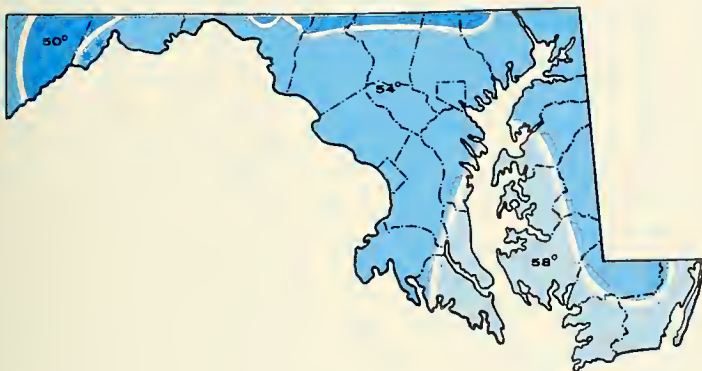


Fall Line (an imaginary line roughly paralleling the coast that connects points where waterfalls occur) to the edge of the continental shelf. The Coastal Plain, therefore, has a submerged and a visible part, with the ocean shore providing the boundary between them.

Low, level land which rarely exceeds 200 feet in elevation provides an excellent habitat for various game. Areas along many of its waterways are suitable for recreation.

Piedmont Province — West of the Coastal Plain lies the Piedmont. This province covers roughly 2,500 square miles, about one-fourth of the State. Separated from the Coastal Plain by the Fall Line and bounded on the West by the Catocin Mountain, the Piedmont is characterized by lovely, low wooded hills, separated by well-drained valleys. The streams have cut deep and narrow valleys into this province, providing scenic views and vistas. Unlike the low, moist Coastal Plain, the Piedmont landscape is rich and varied in resources. The geography of the Piedmont has a great influence on the location of potential open space and recreation areas. Its rolling landscape is attractive, interesting and inviting.

The bedrock underlying the Piedmont Province is largely metamorphic rock which had been changed in texture or composition by heat, pressure or chemically active fluids after its original formation. The bedrock varies in its resistance to erosion, yielding a diversified topography; it is generally much more resistant to erosion than the unconsolidated sediments of the Coastal Plain. At the eastern boundary of the Piedmont Province, streams have eroded into the



sediments, and waterfalls and rapids have been left on the more resistant metamorphic rocks. This is why the boundary line between the Piedmont and Coastal Plain is called the Fall Line.

In the Frederick/Hagerstown area of the Piedmont region, a low but impressive knot of mountain peaks forms an abrupt and steep terminus to the gently rolling westward sweep of the land. Two distinct, diverging ridges reach south from this knot: Catoctin Mountain and South Mountain. South Mountain, only five miles west of Catoctin, has great significance in the geography of the area. It reaches south to the Potomac River, then slants to the southwest as the Blue Ridge of Virginia. The two mountains are valuable recreation resources in this portion of the State.

Appalachian Province — The Appalachian Mountains dominate Maryland's geologic history. All the rocks of the State, except the clays, sands and gravels of the Coastal Plain, are part of the Appalachian Mountain system. Even the hills of the Piedmont are "mountains" in the geologic sense, since it is relatively certain that this area was once a rugged mountain chain.

Beginning at Catoctin Mountain in western Frederick County, the Appalachian Province extends across western Maryland through Washington, Allegany and Garrett Counties, covering about 2,000 square miles, roughly one-fifth of the State.

Between the Blue Ridge district to the east and the Allegheny Plateau district to the west, at Dans Mountain (west of Cumberland) lies the

second district of the Appalachian Province called the Greater Appalachian Valley. This district includes the Hagerstown Valley (Great Valley), and the Allegheny ridges west of the Great Valley. The westernmost district of the Appalachian province is the Allegheny Plateau, including all of Garrett and western Allegany Counties. This broad upland is crossed by ranges of mountains which extend in a northeast-southwest direction with elevations over 3,000 feet in several places. Backbone Mountain at the West Virginia State line is the highest point in Maryland — 3,360 feet.

The peaks and ridges that characterize the Appalachian Province are complemented by dense forest cover, creating a dramatic landscape with excellent wilderness recreation opportunities enhanced by vast fish and wildlife resources.

CLIMATE

Maryland's climate varies with the seasons throughout the State, which has a decided effect on recreation patterns. Although winters are usually mild, low temperatures do occur in the Allegheny plateau of the Appalachian Mountains. For relief from the summer heat, people in central Maryland travel to the mountains and to the shore. Maryland's climate is determined to a large extent by the proximity of large bodies of water. This is especially evident in the Coastal Province where moderate climate is attributed to the Atlantic Ocean and the Chesapeake Bay. This low-lying Province generally has mild winters, while the rest of the State is more characteristic of inland climate for this latitude. Generally, temperatures are higher along the coast and lower in the western part of the State.

TEMPERATURES AT REPRESENTATIVE RECORDING STATIONS

Province	Municipality	Mean Annual	Mean January	Mean July
Appalachian	Oakland	48.2	29.2	67.6
Piedmont	Westminster	53.5	32.9	74.8
Coastal Plain	Ocean City	56.4	37.3	76.4

Annual precipitation in Maryland is about 43 inches, but local averages vary from a high of 48 inches in western Maryland to a low of 35 inches along the eastern shore. Average annual snowfall in Maryland varies from nine inches in the southern part of the eastern shore to 78 inches in the Allegheny Plateau. The heavy snows in western Maryland permit skiing and other winter sports. The eastern portions of the State do receive some snow, although heavy falls are infrequent and melting is rapid.

The final significant factor affecting Maryland's climate is wind direction and speed. The prevailing direction of the wind in most of Maryland is from the northwest during the autumn and winter months, and from the south and southwest during spring and summer. In the mountainous areas of the State, however, west and northwest winds prevail throughout the year. High winds of destructive velocity are rare in Maryland.



SOILS

Maryland, despite its size, exhibits over 750 types of soils.

The soils in the Coastal Plain vary from well-drained to poorly drained. In the Piedmont and Appalachian Provinces, soils are mostly well or moderately drained.

Soils have a profound influence on how land should be used. Soils that exhibited the following characteristics were mapped to help locate areas with potential for open space preservation and recreation:

- Flooding and wetness
- Poorly drained conditions
- Erodability, particularly if vegetation is removed
- Poor stabilization
- Stoney conditions and shallow bedrock
- High water tables
- Steep slopes
- Poor for agriculture, but suitable for other vegetation

Areas exhibiting significant physiographic constraints have outstanding potential for open space preservation. Based upon the conditions created by soil characteristics, appropriate recreation activities can be determined.

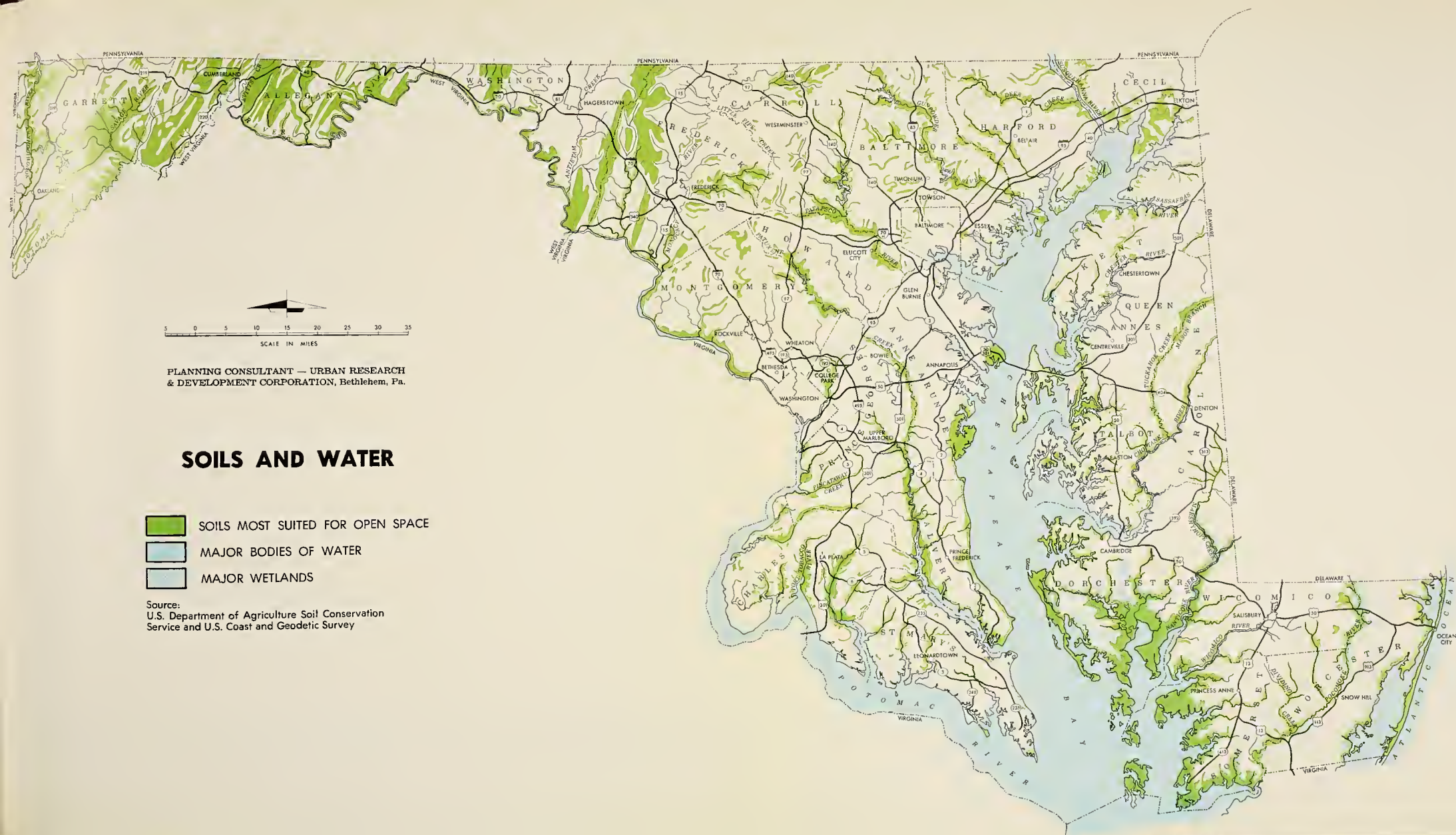
WATER

The Atlantic Ocean, the Chesapeake Bay and their many river and stream tributaries were early sources of wealth and are still vital to Maryland. Today, the large port of Baltimore, the fishing industry and the water-oriented recreation areas are only three reasons why water remains a prime concern of Maryland's citizens.

Water is the most popular focal point for recreational activities. Swimming, boating and fishing are popular in Maryland. The importance of Maryland's watercourses to meet open space and recreation demands and to provide natural habitats for fish and wildlife are reasons for including rivers, streams and other water bodies in the natural features approach to open space and recreation planning.




Rivers and Streams — About 90 percent of the total water supply of Maryland is obtained from streams and rivers with the remainder coming from ground-water sources. Among the more prominent rivers are the Susquehanna, the Potomac, the Patuxent, the Patapsco and the Gunpowder. Although the Susquehanna River originates outside the State, 15 miles of its lower reaches flow through Maryland, emptying into the Chesapeake Bay. Fresh water drainage from the Susquehanna River accounts for approximately 75 percent of all fresh water entering Chesapeake Bay.

The Potomac is important to Maryland because nearly 40 percent of the land area of the State is within the Potomac drainage basin. For most of its course, the Potomac River lies within Maryland, forming the State's boundary with Virginia and West Virginia. The Potomac is the source of water for the Nation's capital and also for part of the greater metropolitan area of Washington.



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SOILS AND WATER

-  SOILS MOST SUITED FOR OPEN SPACE
-  MAJOR BODIES OF WATER
-  MAJOR WETLANDS

Source:
U.S. Department of Agriculture Soil Conservation
Service and U.S. Coast and Geodetic Survey

The Patuxent River, between Baltimore and Washington, D. C., drains into the Chesapeake Bay. This is the largest river entirely within Maryland and drains much of the Piedmont, together with a considerable portion of the Atlantic Coastal Plain of Southern Maryland. Two reservoirs on the Patuxent — Triadelphia and Rocky Gorge — supply water for most of the Maryland suburbs adjacent to the District of Columbia.

Between the Susquehanna River at the far northern end of Chesapeake Bay and the Potomac River forming the central portion of the State, two other major State rivers exist — the Patapsco and the Gunpowder which furnish most of the water supply for the City of Baltimore. Both rivers are focal points for major State Parks which serve the Baltimore Metropolitan Area.

In general, the rivers and streams of the Appalachian Mountains area are fast-flowing because of changes in elevation. The rivers and streams of the Piedmont vary from fast-flowing at their headwater area to moderate as they near the estuary areas of the Chesapeake Bay. The rivers which cross the Coastal Plain are considerably more sluggish than those of the Piedmont.

Maryland has 1,428 miles of fishable, non-tidal streams and rivers — nearly 30,000 surface acres. The 211 miles of cold-water streams, located principally in the Appalachians and extending into the Upper Piedmont areas of the State, provide excellent trout fishing. The 900 miles of warm water streams and rivers throughout the State also offer fine fishing opportunities.

Water Quality — Water quality varies throughout the State. Man is usually the cause of poor water quality, which is a concern for Maryland. Poor water quality deters recreation.

Water pollution problems are far-reaching. They range from industrial waste problems in the Baltimore Harbor area, and acid-mine drainage in the coal fields of western Maryland, to municipal and industrial pollution in the tributaries, streams and estuaries at scattered points throughout Maryland. Wastes from pleasure and commercial water craft add to the problem. Organic pollution from agricultural practices and related land runoff affects the full use of some fresh water streams. Urban development is a source of water quality degradation since silt and sediment washed into streams during construction activities can play havoc with the ecology of an area.

The Maryland Water Resources Commission, the Department of Health and Mental Hygiene and the Department of Water Resources have taken significant steps toward the abatement of water pollution by enforcing specific water quality standards for all Maryland waters.

Chesapeake Bay — The Chesapeake Bay is Maryland's largest water body and the focal point of many activities. The Bay, over 200 miles long, has a surface area of approximately 2,300 square miles and nearly 4,000 miles of shoreline. Although the Bay and its surrounding wetlands are major natural economic and recreational resources, only a small portion of the shoreline is owned by public and quasi-public agencies. The Bay is essentially inaccessible to the State's residents. A Chesapeake Bay study is being undertaken to assist in the planning and management of this significant body of water.

WETLANDS

Maryland has 307,400 acres of wetlands, commonly called marshland, swamp, bog and wet meadows. Most wetlands are found on the Eastern Shore, although each part of Maryland has small scattered wetland areas. An additional million acres of submerged bottom wetlands are under the variable depths of the Chesapeake Bay, its tributaries and the Atlantic Coast estuaries.

The numerous values attributable to wetlands may be overlooked.

They constitute a habitat essential to varied species of aquatic and terrestrial animals. Economic benefits associated with wetlands are derived from fishing, boating, hunting, fur trapping and other recreational activities. A very high percentage (60-90 percent) of our important commercial, sport fish and shellfish live in estuaries at some time during their lives.

The mixture of open surface waters and wetlands in Maryland makes the State one of the most important in North America to migrating and wintering waterfowl. Waterfowl hunting provides outdoor recreation to 35,000 hunters annually in Maryland. It is estimated that these hunters spend between \$10.5 and \$17.5 million annually.

Wetlands also provide significant intangible, non-quantifiable benefits. These include nature study, photography, scientific research, natural science education, scenic and other aesthetic values.

Wetlands may have beneficial effect on the hydraulics of river and estuary systems. These effects include delay and storage of surface runoff and tidal surges, alteration of river flows, waves and tidal currents, and buffering or stabilizing the inundation of coastal lands. Wetlands serve several functions important to water quality through biological and chemical processes, sediment collection, influences on hydrology and shoreline buffer effect. Aquatic plants in wetland areas are important sources of the oxygen essential to natural processes.

Soils associated with wetlands are unsuited for septic drainage fields. If development is prohibited in such areas, the wetlands can buffer against potential pollutants that might be generated by shoreline development near or on waterways. Wetlands also function as settling or filtering basins.

WOODLANDS AND VEGETATION

Maryland's three million acres of forest land cover about 46 percent of the land area of the State. The Coastal Plain Province has the greatest number of acres in forest — nearly 1.8 million. The Appalachian Province has 60 percent of its lands in forest, while the Piedmont is 30 percent forested.

Forests are valuable natural resources for open space conservation, recreational development, and economic growth. Wooded areas:




- Provide opportunities for a multitude of recreational activities;
- Stabilize soil, reduce water runoff and retard erosion along streams and rivers;
- Retard landwash before it reaches and pollutes water courses;
- Protect aquifer recharge areas;
- Affect local climate by providing shade, adding humidity, and removing dust from the air;
- Soften the effects of strong winds;
- Recycle oxygen;
- Protect and provide wildlife habitats;
- Provide a visually and aesthetically pleasing environment which increases land values adjacent to other land uses; and
- Are an economic asset.

The variation in forest types helps to provide a variety of open space and recreation opportunities. Three major forest associations are distributed across Maryland, in broad bands from east to west. The first of these is the oak-pine association which is usually related to the Coastal Plain. The second is the oak-chestnut association beginning on the Piedmont Plateau and extending into the Great Valley, Ridge and Valley area and terminating at the Allegheny Mountains. The third is the mixed mesophytic forest of fine hardwoods which is located in the center of the Appalachian Mountains.

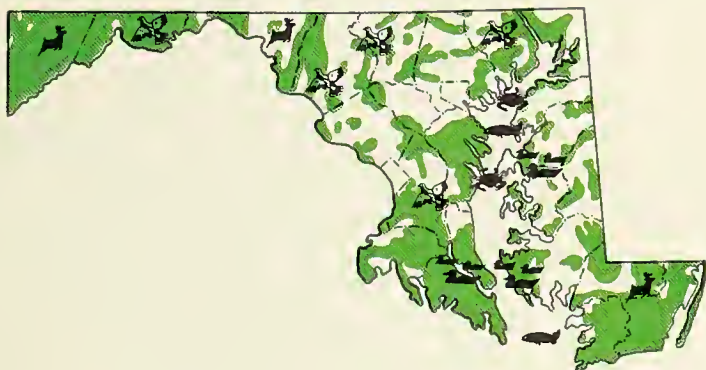


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NATURAL FEATURES

-  STEEP SLOPE
-  WOODLAND & BRUSHWOOD
-  UNIQUE NATURAL AREAS

Source:
U.S. Coast and Geodetic Survey, Maryland Department of State Planning



UNIQUE NATURAL AREAS

Maryland has a wide array of "unique natural areas" which the Technical Advisory Committee on Natural Areas in Maryland defines as areas where natural processes predominate and are not significantly influenced by man. These areas were inventoried and identified.

The location, size and configuration of these areas are depicted on the Natural Features Map. These unique natural areas include caves, geologic formations, beautiful valleys, vast wetlands and other significant natural resources that have vast potential open space and outdoor recreation value.

FISH AND WILDLIFE

Maryland's many different natural characteristics and conditions, from its rugged mountains to the Chesapeake Bay, create a variety of natural habitats.

The Chesapeake Bay and its tree-like estuaries provide one of the most fertile and varied marine habitats on the Atlantic Coast, with living space for nearly 300 different species of fish and shellfish. The differences in salt content from the lower to the upper reaches of the Chesapeake Bay, the saline Atlantic, and the fresh waters of Maryland's many rivers, streams and lakes accommodate the State's large and varied fish population.

Sport fish in the Chesapeake Bay include the bluefish, butterfish, catfish, bullhead, croaker, black drum and red drum, flounder, shad, Norfolk spot, rock, sea trout, and perch. The salt waters of the Atlantic Ocean add to the variety and include cod, sea herring, mackerel, porgy, sea bass, sturgeon and whiting. Off-shore from Ocean City, fishermen seek the white marlin.

Maryland's extensive system of waterways range from fast, cold rushing mountain streams in western Maryland to warm, slow-moving streams in the Coastal Plain area. The most common fresh water fish in Maryland are the yellow perch, sunfish, bass, trout, pickerel, bullhead, catfish and carp.

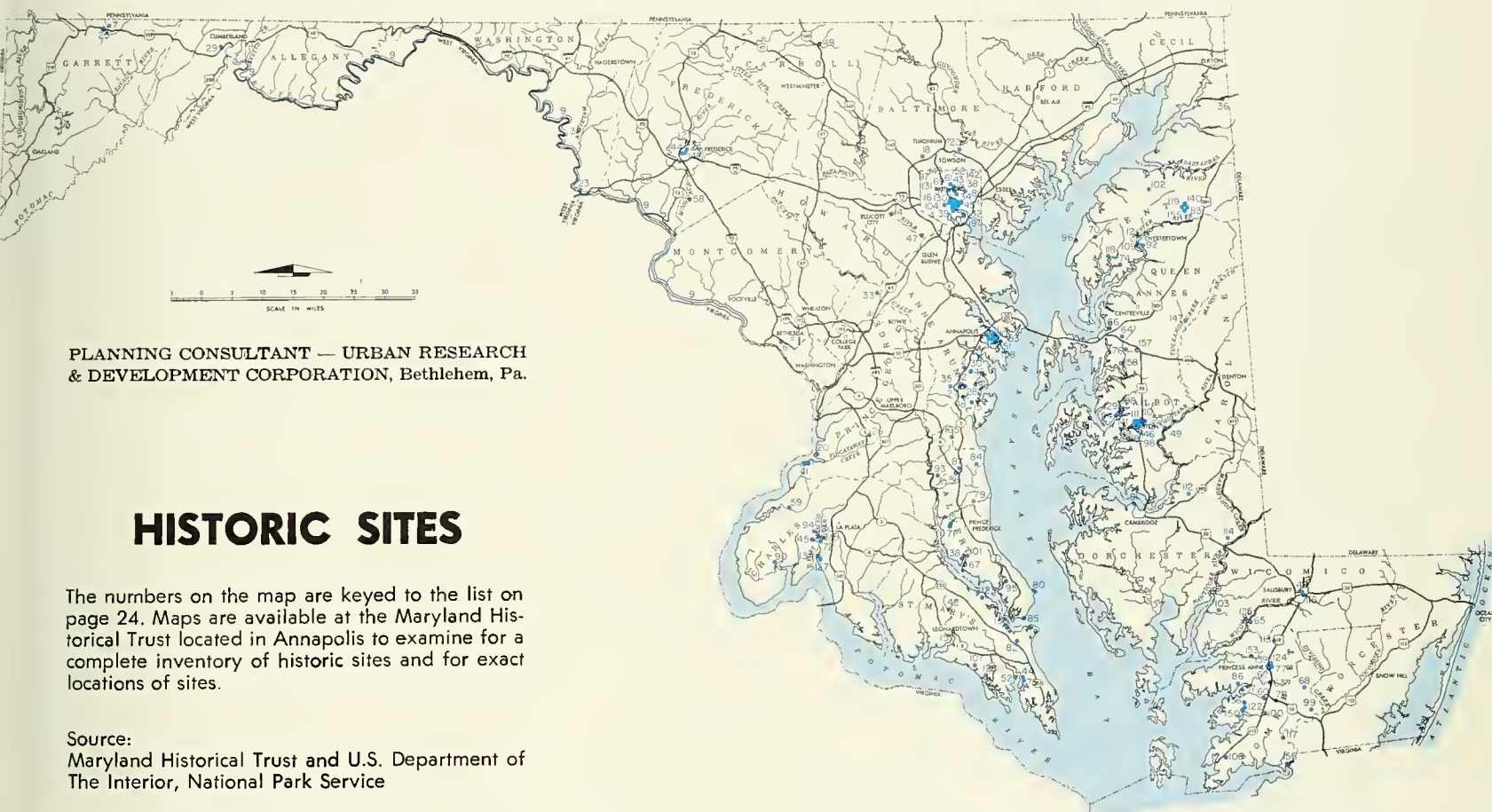
Wildlife, like aquatic life, is diverse and abounds throughout Maryland. From black bear, deer, turkey and small game to upland game birds and migratory wetland wildlife, the State is a hunting and observatory paradise. The Maryland Fish and Wildlife Administration has been very active in managing wildlife habitats.

HISTORIC SITES

The creation of the Maryland Historical Trust and the inauguration of a Statewide Historic Preservation Plan sponsored by the Maryland Historical Trust and the Maryland Department of State Planning signify Maryland's goal of keeping alive the State's many significant historic structures and sites. The Historic Preservation Plan will seek to bridge the gap between historic preservation and the development programs of the twentieth century. The Plan, when complete, will recommend a broad range of action programs to make historic preservation a useful development tool — programs that will provide educational, cultural and economic benefits to our communities. The Statewide open space and outdoor recreation framework incorporates historic buildings and sites because of their educational, cultural and economic value.

Historic sites on the National Register of Historic Places and additional sites nominated for the Register are mapped. It is interesting that many of these historic sites relate closely to one basic natural feature: water. Water was an early form of transportation and has always been a necessity for human survival.

Taking historic places into consideration in planning open space areas represents a major step toward achieving consistent plans.



The following 56 places are listed in the National Register of Historic Places as of June 3, 1971. The Register is a publication administered by the Advisory Council on Historic Preservation and the National Park Service. The National Register was created under the National Historic Preservation Act of 1966.

- | | | |
|---|--|--|
| 1. Accokeek Creek Site | 19. Fort McHenry National Monument & Historic Shrine | 39. Peale's Baltimore Museum |
| 2. All Hallows' Church | 20. Fort Washington | 40. Demberton Hall |
| 3. Antietam National Battlefield Site | 21. Hammond-Harwood House | 41. Piscataway Park |
| 4. Baltimore & Ohio Transportation Museum and Mount Clare Station | 22. Hampton National Historic Site | 42. Resurrection Manor |
| 5. Brice House | 23. Harpers Ferry National Historic Site | 43. The Flag House |
| 7. Cesselman's Bridge National Road | 24. Hessian Barracks | 44. St. Mary's City Historic District |
| 8. Cedar Park | 25. Fuller-Baker Log House | 45. Shot Tower |
| 9. Chesapeake & Ohio Canal National Historic Park | 26. His Lordship's Kindness | 46. The South River Club |
| 10. Chase-Lloyd House | 27. Larkin's Hill Farm | 47. Thomas Viaduct Baltimore & Ohio Railroad |
| 11. Colonial Annapolis Historic District | 28. Larkin's Hundred | 48. Tulip Hill |
| 12. Chestertown Historic District | 29. LaVale Tollgate House | 49. Homestead Zoning District |
| 13. Clifton Park Valve House | 30. London Town Publik House | 50. U. S. F. Constellation |
| 14. Ellicott City Station | 31. Maryland Statehouse | 51. U. S. Naval Academy |
| 15. Evergreen | 32. Mary's Mount | 52. West St. Mary's Manor |
| 16. Federal Hill Historic District | 33. Montpelier | 53. Whitehall |
| 17. Fells Point Historic District | 34. Mount Clare | 54. Wye House |
| 18. Fort Garrison | 35. Obligation | 55a. Queen City Hotel |
| | 36. Old Lock Pump House Chesapeake & Delaware Canal | 55b. Denton House |
| | 37. Old Roman Catholic Cathedral | |
| | 38. Otterbein Church | |

The following places are inventory nominations from the Maryland Historical Trust and the State of Maryland to the National Register of Historic Places for national acceptance and recognition. These existing historical architectural facilities and historical landmarks of places, buildings or sites of exceptional interest represent the State's cultural heritage over the years, beginning from Colonial days.

- | | | | |
|---------------------------------|------------------------------------|---|--|
| 55. Academy of the Arts | 81. Crooked Intent | 107. Mulberry Fields | 133. St. Richard's Manor |
| 56. All Saints Church | 82. Customs House (Calvert County) | 108. Myrtle Grove | 134. St. Thomas Manor |
| 57. Almodington | 83. Customs House (Kent County) | 109. No. 111 Queen | 135. Stag House |
| 58. Amelung House | 84. Dentzel Carousel | 110. No. 132 South Harrison | 136. Sutler's Conclusion |
| 59. Araby | 85. Drum Point Lighthouse | 111. No. 20 West Street | 137. Talbot County Historical Society |
| 60. Arlington | 86. Elmwood Farm | 112. Old House of the Hinges | 138. Taney Place |
| 61. Brooklandwood* | 87. Emery Jones House | 113. Old House on Tull | 139. Teackle Mansion |
| 62. Beckford | 88. Foxley Hall | 114. Old Trinity Church | 140. The Abbey, or The Hynson Ringgold |
| 63. Beverly | 89. Friends Meeting House | 115. Pace House and Gardens* | 141. The Anchorage |
| 64. Bloomingdale | 90. Friendship | 116. Poplar Hill | 142. The Battle Monument |
| 65. Bounds Lot | 91. Glasgow | 117. Rehobeth Presbyterian Church | 143. The First Unitarian Church* |
| 66. Bowlingly | 92. Godlington Manor* | 118. Reward | 144. The Frederick Barracks |
| 67. Brooke Place Manor | 93. Grahame House | 119. River House or Denton House | 145. The Retreat |
| 68. Burton Cannon House | 94. Habré De Venture* | 120. Rose Hill (Charles) | 146. Third Haven Meeting House |
| 69. Caton-Carroll Mansion | 95. Hill Farm | 121. Rose Hill (Frederick) | 147. Thomas House |
| 70. Caulk's Field | 96. Hinchingham | 122. Salisbury Plantation | 148. Trail Mansion |
| 71. Cedar Hill | 97. Homewood* | 123. Sotterly | 149. Troth's Fortune |
| 72. Chimney House | 98. Hughlett-Henry House | 124. St. Andrew's Episcopal Church | 150. Tudor Hall (Somerset) |
| 73. Christ Church Parkish House | 99. Ivy Hall | 125. St. Bartholomew's Episcopal Church | 151. Tudor Hall (St. Mary's) |
| 74. Clark's Conveniency | 100. Kingston Hall | 126. St. George's Church | 152. Washington Monument |
| 75. Clobber's Fancy | 101. La Vielle House | 127. St. Ignatius Church | 153. Waterloo (Alms House) |
| 76. Cloverfield | 102. Lamb's Meadow | 128. St. John's College | 154. Weems House |
| 77. Cooley House | 103. Long Hill | 129. St. John's Episcopal Church | 155. Widehall |
| 78. Corn Crib on Route 13 | 104. Lovely Lane Methodist Church | 130. St. Mary's Seminary Chapel* | 156. Williams Point Farm |
| 79. Cornhill | 105. Maidstone | 131. St. Paul's Episcopal Church | 157. Wye Mill |
| 80. Cove Point Lighthouse | 106. Makepeace | 132. St. Paul's Rectory | 158. Wye Plantation |

*Indicates places that, as of February 1972, have been placed on the National Register of Historic Places.

Additional National Historic Landmarks include: Basilica of the Assumption of the Blessed Virgin Mary, Carrollton Viaduct, Catoctin Furnace Historic District, Doughoregan Manor, Edgar Allan Poe House, Greenfields, Hays-Heighe House, Mt. Vernon Place Historic District, Principio Furnace, Sandy Point Farm House, Sheppard and Enoch Pratt Hospital.

SUPPLY



STATEWIDE OUTDOOR RECREATION AND OPEN SPACE INVENTORY

Following analysis of the physiographic characteristics of Maryland, existing open space and outdoor recreation facilities were inventoried. This provided a basis for comparing existing areas with the natural features framework and with the needs indicated in the demand study, described in the following chapter. This comparison provided an understanding of the relationship that exists between the supply of recreation facilities and the demand being placed upon them.

The Department of State Planning undertook a statewide inventory of public and private recreation facilities. Questionnaires were sent to appropriate Federal, State, county and municipal agencies to insure up-to-date information on each facility. Questionnaires were also sent to private recreation enterprises.

Most questionnaires sent to governmental agencies and 20 percent of those sent to private facilities were returned. While total acreages by classification were indicated for recreation areas, fewer than 10 percent of the returned questionnaires provided information requested on the number and total area of various facilities at each site. This deficiency proved most unfortunate because figures calculated in the demand study for specific activities could not be compared to the facilities which exist. Consequently, a true assessment of specific activity needs could not be made.

The map on the opposite page shows the location of known recreation areas throughout the State. Nearly 325,000 acres are devoted to parks, forests, historic sites and wildlife management areas and refuges. The State owns the majority of this land.

The Western Maryland Region has a significant number of publicly-owned open space and recreation areas. This Region has 60 percent of the State-owned open space and recreation lands.

The Baltimore and Suburban Washington Regions have 85 percent of the State's population. While the Suburban Washington Region has significant open space and stream valley recreation systems, the need is great to provide additional open space and recreation areas in this vast urbanizing complex.

The Southern Maryland and two Eastern Shore Regions have well-distributed open space and recreation areas. Although the open space pattern is considerable in the Eastern Shore Regions, particularly the Lower Eastern Shore, nearly 90 percent of the open space acreage is in sizeable wildlife management areas that have limited intensive recreational use potential; their true value is for open space.

The number of acres of land at each recreation site was classified into one or more of 10 categories devised to conform with the Federal Bureau of Outdoor Recreation classification system. This system permits comparison of the quantity of Maryland open space and recreation lands with that of other states, and permits identification of the lands' natural advantages and limitations.

The following table summarizes the number of acres in each classification by Federal, State, local and private ownerships for each of the regions. This information provides a perspective of the dominant character of recreation areas within each region and the prominent provider of the open space and recreation areas.

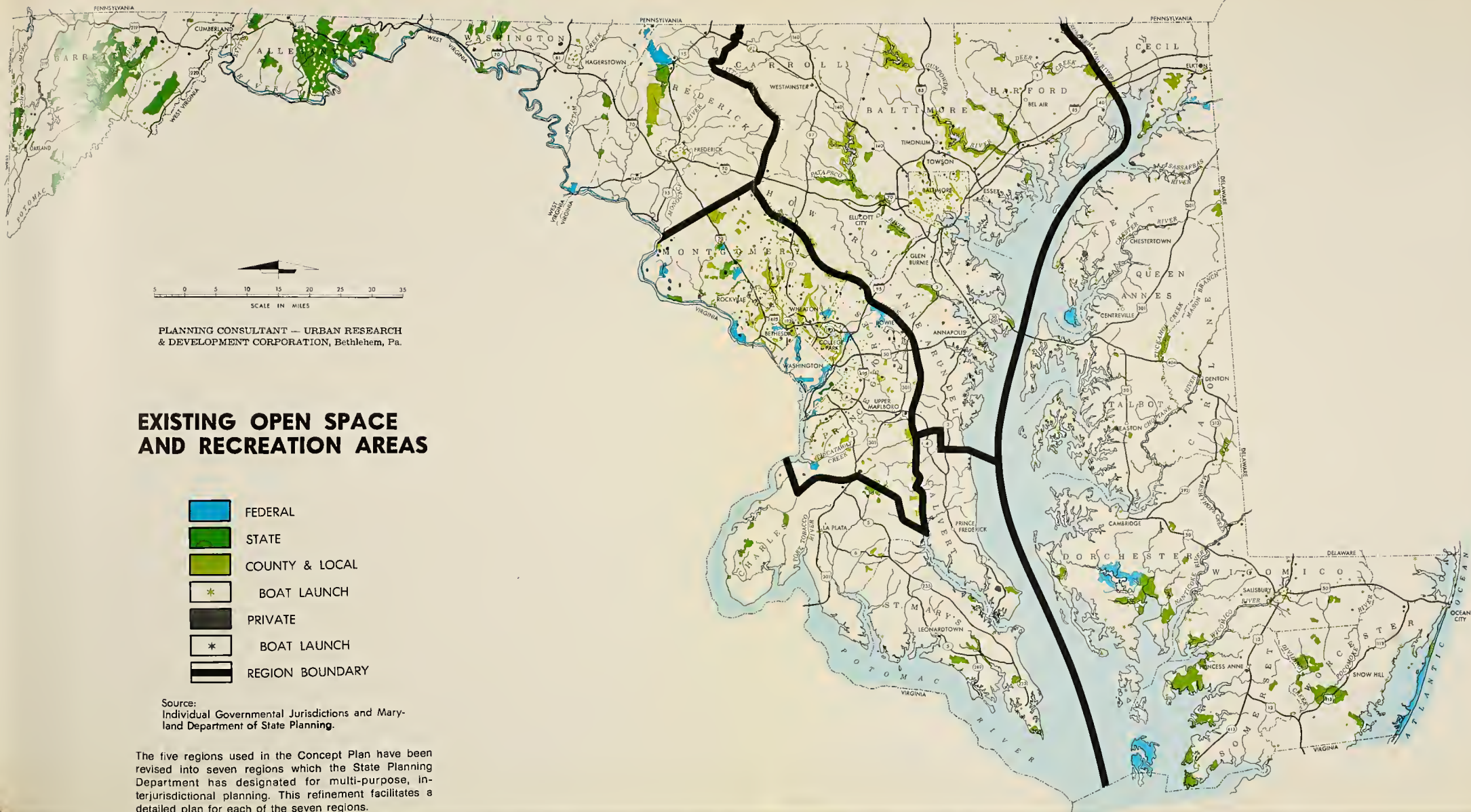


TABLE 2 PUBLIC OWNERSHIP OF OUTDOOR RECREATION & OPEN SPACE AREAS BY COUNTY AND PLANNING REGIONS, 1971					
Region and County	Ownership			Total Acres	
	Federal	State	Local		
Western Maryland & Frederick Regions	10,339	135,965	8,791		155,095
Allegany	1,188	42,501	114	43,803	
Garrett	0	78,746	5	78,751	
Frederick	5,769	9,468	8,351	23,588	
Washington	3,382	5,250	321	8,953	
Suburban Washington Region	6,421	7,795	9,797		24,013
Prince Georges	5,769	4,057	2,346	12,172	
Montgomery	652	3,738	7,451	11,841	
Baltimore Region	17,826	17,692	15,896		51,414
Baltimore City	86	0	5,844	5,930	
Baltimore County	45	9,262	6,422	15,729	
Anne Arundel	1,695	1,163	1,805	4,663	
Harford	16,000	1,367	681	18,048	
Howard	0	4,733	921	5,654	
Carroll	0	1,167	223	1,390	
Southern Maryland Region	10	7,159	960		8,129
Calvert	0	313	518	831	
Charles	10	6,158	11	6,179	
St. Mary's	0	688	431	1,119	
Upper Eastern Shore Region	3,653	7,948	630		12,231
Cecil	1,369	4,332	282	5,983	
Kent	2,284	1,367	128	3,779	
Caroline	0	1,920	150	2,070	
Talbot	0	159	27	186	
Queen Anne's	0	170	43	213	
Lower Eastern Shore Region	23,929	48,989	444		73,362
Worcester	8,400	14,261	66	22,727	
Dorchester	11,216	13,058	32	24,306	
Wicomico	0	3,238	304	3,542	
Somerset	4,313	18,432	42	22,787	
TOTAL STATE					324,244 acres

Source: Maryland Department of State Planning, Recreation Inventory, 1970-71.

Note: Leased land, reservoir lands, inappropriate military reservation and game and inland fish lands are excluded from figures.

Private recreation acreages according to inventory are recorded in the Private Sector, Chapter 7.

*Leased land, reservoir lands, military reservations and game and inland fishlands are excluded from figures.

TABLE 3 PUBLIC OUTDOOR RECREATION & OPEN SPACE ACREAGE BY USE CATEGORIES* BY COUNTY AND PLANNING REGIONS, 1970-71												
Use Category	Neighborhood	Community	Metro-Regional	City-Wide	Urban Open Space	General Outdoor	Natural Environ.	Outstand Natural	Wilderness Primitive	Historic Cultural	Unclassified	Total
Western Maryland & Frederick Regions												
Allegany	90	24	0	96	52	387	41,516	20	0	0	1,618	43,803
Garrett	0	5	0	80	30	1,035	75,077	40	2,100	348		78,751
Frederick	47	124	8,020	53	0	6,599	8,707	30	0	8		23,588
Washington	25	115	0	63	0	526	5,075	0	0	21	3,128	8,953
Suburban Washington Region*												155,095
Prince Georges	0	1,220	719	158	0	9,443	37	0	0	0	595	12,172
Montgomery	928	495	2,115	239	3,913	296	1,789	0	0	166	900	11,841
Baltimore Region												24,013
Baltimore City	403	806	3,109	427	94	80	0	4	0	0	1,007	5,930
Baltimore County	1,134	692	494	0	46	208	9,156	0	0	0	3,999	15,729
Anne Arundel	265	852	498	48	0	74	753	0	29	10	2,134	4,663
Harford	0	29	0	150	0	545	1,321	0	16,000	3		18,048
Howard	20	0	0	0	901	106	0	0	0	0	4,627	5,654
Carroll	0	79	0	0	0	162	0	0	0	0	1,149	1,390
Southern Maryland Region												51,414
Calvert	0	0	230	0	0	288	313	0	0	0		831
Charles	0	0	0	0	0	1,771	3,204	0	0	10	1,194	6,179
St. Mary's	244	94	0	0	0	209	572	0	0	0		1,119
Upper Eastern Shore												8,129
Cecil	7	150	0	0	126	801	4,237	0	0	0	662	5,983
Kent	38	7	71	0	0	15	3,134	0	0	0	514	3,779
Caroline	0	0	0	0	0	30	2,028	12	0	0		2,070
Talbot	0	0	0	0	0	0	185	0	0	1		186
Queen Anne's	6	170	10	1	0	26	0	0	0	0		213
Lower Eastern Shore												12,231
Worcester	0	35	0	0	0	164	20,276	100	394	1	1,758	22,727
Dorchester	0	32	0	0	0	0	24,274	0	0	0		24,306
Wicomico	58	86	105	72	0	4	3,023	0	0	0	194	3,542
Somerset	0	0	0	42	0	142	15,749	0	6,896	0		22,787
GRAND TOTAL — STATE OF MARYLAND												324,244

Source: Maryland Department of State Planning, State Recreation Inventory, 1970-71.

DEMAND

OUTDOOR RECREATION DEMANDS & REQUIREMENTS
PURPOSE

The primary purpose of this section is to make realistic forecasts of the demand for various types of recreation activities in Maryland's counties and regions. The major objectives are to analyze and determine the impact of socio-economic characteristics and trends on recreation patterns and the participation patterns of residents and non-residents. In this report, two major demand categories are used as a basis for determining total demand:

- 1. In-State Demand — exerted upon each county and region by its residents (county resident demand) and by all other Maryland residents (inter-county demand).
- 2. Out-of-State Demand — exerted upon each region in Maryland by out-of-state users.

The approach to studying demand presented here is oriented to human needs for outdoor recreational facilities. Although 21 popular outdoor activities are dealt with, the State of Maryland cannot assume responsibility for meeting all demand for all activities. Data are from Federal, state, municipal and private sources and include data on population characteristics, human preferences, demand levels and park attendance.

The primary factors used in determining future outdoor recreation demand in Maryland include natural features and resources, age, family income, resident population size, inter-state and inter-regional recreation, time and distance of travel, existing conditions and changing patterns. Through the analysis and application of these factors, demand forecasts for 21 recreation activities are made to the years 1970, 1980, 1990 and 2000; the 1970 and 1990 forecasts are presented in this report. Table 4 lists and briefly describes the 21 activities.

The following sections describe the procedures, assumptions and results of the demand study. Total land and facility requirements are presented as a basis for developing plan recommendations.

IN-STATE DEMAND
COUNTY & REGIONAL RESIDENT DEMAND
BASIC PROCEDURES

Recreation demand is expressed in "number of occasions" (the number of separate times people engage in recreational activity). The total number of occasions is determined by multiplying the percent of the population which participates in a recreation activity (the participation rate) by the number of times an average person participates in the activity over a season.

The survey of recreational demand for the United States, prepared under the auspices of the Outdoor Recreation Resources Review Commission (ORRRC) is utilized. Other sources have been used, chiefly to discern Maryland's population characteristics, income levels and living patterns in 1970. The 1970 U. S. Census of Population data were assembled by the Maryland Department of State Planning to show age distribution and households by location; and a recent edition of Sales Management, a marketing journal, was used as the primary source of income information.

ASSUMPTIONS

Because this study relies upon data from one source to derive other relationships and to reflect trends, the following major assumptions are made:

- Socio-economic characteristics of people determine their recreation patterns, notably those of choice demand and frequency.

Table 4
RECREATION ACTIVITIES USED

ACTIVITY CATEGORIES	EXAMPLES OF ACTIVITY TYPES
ATTENDING OUTDOOR CULTURAL EVENTS	Attending outdoor concerts, outdoor plays, outdoor art exhibits
ATTENDING OUTDOOR SPORTS EVENTS	Attending outdoor baseball games, football games, tennis matches, soccer matches, golf tournaments.
BICYCLING	Bicycling for pleasure.
BOATING	Motor boating, canoeing, sailing, yachting.
CAMPING	Overnight camping in tents, sleeping bags, or travel trailers in undeveloped areas or in campgrounds.
DRIVING FOR PLEASURE	Leisure or pleasure driving, not involving extended periods of time.
FISHING	Stream, lake, surf or deep-water fishing, but not for profit. Casting for fish for pleasure.
HIKING	Hiking on a trail while carrying packs.
HORSEBACK RIDING	Saddle or bareback horse riding for pleasure, but not for horse racing.
HUNTING	Hunting of fowl or game with any common weapon, but not for profit, Trapping, but not for profit.
ICE SKATING	Ice skating for pleasure.
NATURE WALKS	Group or individual walks usually in rural areas, but sometimes in urban areas, to observe nature and works of nature and to collect specimens. Bird watching.
PICNICKING	Taking food together out of doors, but not as incidental to home dining.
PLAYING OUTDOOR GAMES OR SPORTS	Playing or participating in outdoor games or sports including baseball, basketball, football, tennis, golf, soccer, running, lacrosse, rugby, volley ball.
SIGHTSEEING	Travelling with the objective to observe works of man or nature which are of interest and involving an extended period of time (weekend) away from home.
SLEDDING OR TOBOGGANING	Sledding, tobogganing.
SNOW SKIING	Skiing on snow for pleasure.
SWIMMING (BEACH)	Scuba diving, swimming, lounging at an ocean or lake front beach, including incidental games and activities.
SWIMMING (POOL)	Swimming or lounging at an outdoor pool.
WALKING FOR PLEASURE	Walking on streets, sidewalks or the like in small groups or individually for pleasure, but not hiking.
WATER SKIING	Water skiing for pleasure, surfing.

NOTE: Emphasis on the use of ORRRC categories, or combinations thereof, and the lack of demand data available on such specific activities as snowmobiling, skydiving, etc. precluded the use of these categories. Although not specifically identified, such activities as tennis and golf are included in "Playing Outdoor Games or Sports".

None of the above sources estimated growth in the winter sports. Because it was felt that snow skiing is increasing in popularity similar to boating, the growth rates for boating as published in the 1965 BOR report were used also for snow skiing. The BOR growth rate for playing outdoor games and sports was used for estimating growth in ice skating, sledding and tobogganing.

- The results of the ORRRC survey have validity to smaller areas like Maryland. Maryland's population, whether classified in age groups or in income ranges, has the same basic recreation habits as those of comparable national groups.
- Of all the socio-economic characteristics correlated to recreation patterns, annual family income and age of population are assumed to be most important in this study. (Data were not readily available from the 1970 census for other identified characteristics — educational attainment, race, occupation, habitat, etc. — when the study was made.)
- Changes in taste or habit, work schedules, and innovative changes in recreation not anticipated by the ORRRC and the BOR forecasts will not occur.
- Changes in the participation rates and the number of occasions on which people participate in activities forecasted by BOR for the Nation as a whole will be applicable in Maryland.
- For census data and ORRRC information, the population within a category is homogeneous.

PARTICIPATION RATES

Maryland shares the urban experiences of states identified by ORRRC as the Northeast Region. Maryland also shares in the rural patterns evident in states designated by ORRRC as the Southern Region. In this study, it is not assumed that Maryland exhibits all the recreation patterns shown in the ORRRC Study for the Northeast Region or all patterns of the Southern Region. Table 5 shows that Maryland's characteristics do not fit exclusively into either the Northeast or the Southern Region. Maryland has an income versus recreation pattern which is similar to the Northeast Region; Maryland resembles the Southern portion with respect to age of population versus recreation patterns.

The 1970 and 1990 annual resident demand occasions by recreation activity by region are shown in Table 6 on the following page.

Table 5
1960 POPULATION COMPARISON OF MARYLAND WITH
ORRRC SAMPLE FOR THE U.S., NORTHEAST REGION & SOUTHERN REGION

Population Characteristics	Maryland (US Census)	U. S. (ORRRC)	Northeast Region (ORRRC)	Southern Region (ORRRC)
PERCENT OF TOTAL FAMILIES				
Annual Family Income				
Less than \$3,000	15%	23%	14%	37%
\$3,000 - \$5,999	31%	38%	46%	36%
\$6,000 - \$9,999	34%	27%	27%	20%
\$10,000 & Over	20%	12%	12%	7%
TOTAL*	100%	100%	100%	100%
Median	\$5,310	\$3,630	\$5,420	\$4,000
PERCENT OF TOTAL POPULATION				
Age				
12 - 24 years	24%	25%	24%	27%
25 - 44 years	39%	35%	36%	35%
45 - 64 years	26%	28%	28%	27%
65 years and over	10%	12%	12%	11%
TOTAL*	100%	100%	100%	100%
Median	38.3 yrs.	39.3 yrs.	39.4 yrs.	38.1 yrs.

* Figures may not total 100 percent because of rounding. In 1960 dollars.

INTER-COUNTY & INTER-REGIONAL DEMAND

Basic Procedures and Assumptions

This section outlines the method used to calculate recreation demand exerted by State residents on the counties and regions of Maryland.

The following basic assumptions are made:

- Attendance at a particular recreation site decreases as the travel time from place of residence to the site increases, except for sites offering unique physiographic qualities, such as mountains and seashore.
- Automobile and buses are the only modes of transportation from residence to recreation site.
- The attractiveness and suitability of sites for recreational use are independent of location, except that snow skiing is limited to hilly and mountainous terrain and beach swimming, fishing, water skiing, and boating are limited to lake and shore areas.
- There is a maximum desirable travel time for each activity, beyond which a participant will not go. (See Table 7.)
- The attractiveness and suitability of all similar sites within a county or a region are equal, except for sites offering unique locational or physiographic characteristics.

Travel Times

Travel times between county seats are calculated by using the speed rates shown in Table 8. County seats are in most instances, the population or geographic centers of the counties.

The total in-state demand is calculated by using the maximum desirable travel times, the calculated travel times between county seats and the resident demand forecasts.

Table 9 summarizes the in-state demand, taking into account inter-county and inter-region demand. These demand figures indicate by region, the demand (in number of occasions) which will be exerted by all Maryland residents upon each Region.

OUT-OF-STATE DEMAND

Basic Procedures and Assumptions

Records indicate that a considerable portion of attendance at Maryland's State Parks is by out-of-state residents who live near or vacation in Maryland.

Out-of-state demand is the number of occasions of participation of out-of-state residents in Maryland minus the estimated number of occasions on which Maryland residents utilize recreational facilities in other states.

In the summer of 1965, the Maryland Department of Forests and Parks surveyed users of 12 state parks and determined their places of residence. Available county and local sources also were used to calculate current and anticipated out-of-state demands in Maryland.

Table 10 shows the estimated percentages of net out-of-state attendance within each region and the net out-of-state demand expressed as a percentage of in-state demand.

Two assumptions, in addition to those listed earlier, are made with respect to out-of-state demand:

- Out-of-state users seek recreation by activity in the same proportion as in-state users.
- The proportion of out-of-state demand to in-state demand remains constant.

Table II on page 34 shows the 1970 and 1990 annual out-of-state demand by Region and recreation activity.

TABLE 6
SUMMARY OF ANNUAL RESIDENT DEMAND OCCASIONS BY REGION AND ACTIVITY — 1970 and 1990 (in thousands)*

Activities	Western Maryland/ Frederick County 1970 1990		Baltimore 1970 1990		Sub. Washington 1970 1990		South. Maryland 1970 1990		U. Eastern Shore 1970 1990		L. Eastern Shore 1970 1990	
Attending Outdoor Concerts,	145.5	279.1	1,535.900	3097.1	926.4	2362.1	57.4	119.5	69.0	136.8	58.5	110.9
Attending Outdoor Sports Events	207.8	1089.8	8670.4	13564.6	4913.4	9893.1	462.5	775.0	523.5	831.9	509.6	419.2
Bicycling	306.9	413.0	2081.8	2990.9	1187.9	2150.5	109.1	164.8	128.1	181.4	122.7	164.8
Boating	698.9	1287.1	5681.5	10731.9	3189.0	7877.8	256.9	522.0	308.99	603.1	309.2	369.8
Camping	288.6	665.5	2220.7	4499.4	1383.1	3609.5	127.0	276.6	146.4	289.3	136.0	263.6
Driving for Pleasure	5232.5	7925.0	37862.700	56866.0	10006.9	40744.9	1969.6	3338.7	2363.9	3781.3	2305.4	3181.0
Fishing	1004.1	1312.9	5892.0	8014.4	3537.8	6232.0	425.6	527.5	522.0	611.3	509.1	361.6
Hiking	141.0	263.8	1042.5	2100.5	808.6	2017.7	57.5	119.3	63.9	130.2	65.1	120.8
Horseback Riding	417.7	661.6	3058.0	5199.9	1790.8	3759.8	175.8	307.0	188.6	314.2	167.6	316.6
Hunting	469.5	623.0	2423.6	3182.9	2235.4	3836.5	199.4	289.2	235.4	319.1	220.7	382.5
Ice Skating	122.3	200.2	958.0	1655.4	592.9	1305.8	45.5	88.0	54.2	93.8	53.2	87.1
Nature Walks	726.1	1133.8	6213.7	10121.9	3627.9	7558.8	272.3	485.6	333.4	616.3	298.2	162.6
Picnicking	2089.7	3173.4	17857.9	28289.6	10355.2	21105.7	794.1	1354.4	956.4	1243.3	904.0	1367.2
Playing Outdoor Sports	5439.6	6946.8	51415.9	79552.0	31314.0	61044.7	1877.7	3107.7	2472.5	3821.0	2167.0	3137.1
Sightseeing	1645.9	2717.2	14234.8	24457.7	8562.9	18880.5	561.6	1033.8	701.5	1219.5	478.3	1110.4
Sledding & Tobogganing	378.5	636.1	4556.9	7896.3	2762.4	6077.1	120.0	235.6	142.6	249.9	125.2	303.9
Snow Skiing	45.5	76.0	352.3	864.2	308.3	660.9	15.5	31.2	17.7	30.6	17.3	28.4
Swimming Beach	2056.4	3760.7	17766.2	33915.4	11017.3	26968.0	754.2	1498.3	886.3	1806.8	882.0	1605.3
Swimming Pool	8243.0	13397.2	68946.6	117222.4	40506.4	88249.3	2824.1	5198.2	3546.8	6099.8	3546.1	6756.6
Walking for Pleasure	199.1	449.8	1156.0	2805.0	841.2	2563.7	65.9	167.8	78.0	184.7	72.2	163.1
Water Skiing												
TOTALS	30858.6	48732.0	253913.4	417038.5	149867.8	316898.4	11171.7	19641.2	13739.1	22764.3	13047.4	20537.5

* Figures are rounded to the nearest hundreds.

Note: Resident Demand is the demand expressed in a given county or region by the residents of that particular county or region.

Table 7
MAXIMUM DESIRABLE TRAVEL TIME BY ACTIVITY*

Activity	Maximum Travel Time (in minutes)
Attending Outdoor Concerts, Dramas	60
Attending Outdoor Sports Events	60
Bicycling	30
Boating	90
Camping	240
Driving for Pleasure	60
Fishing	120
Hiking	60
Horseback Riding	60
Hunting	120
Ice Skating	60
Nature Walks	30
Picnicking	60
Playing Outdoor Sports	30
Sightseeing	240
Sledding & Tobogganing	30
Snow Skiing	120
Swimming Beach	120
Swimming Pool	30
Walking for Pleasure	30
Water Skiing	120

* The times, estimated by Urban Research & Development Corporation, reflect the maximum desirable times a person should be expected to travel, given an adequate level of recreation opportunities in an area. The figures do not represent the maximum time a person will travel to participate in an activity.

Five minutes were added to each driving time to allow for traffic lights, stop signs and interchanges. An official highway map of Maryland was used to calculate mileage.

Table 8
ASSUMED TRAVEL SPEED BY HIGHWAY TYPE TO CALCULATE DRIVING TIMES

HIGHWAY TYPE	TRAVEL SPEED IN MILES PER HOUR	
	IN A CITY	ELSEWHERE
Interstate	50	60
4 - 6 lane, controlled access	40	60
Other 4 - 6 lane	30	50
2-lane	20	40

Where more than one fairly direct route is possible between two county seats, the shortest travel time is used.



TABLE 9 SUMMARY OF ANNUAL IN-STATE DEMAND OCCASIONS BY REGION AND ACTIVITY — 1970 and 1990 (in thousands)*												
Activities	Western Maryland/ Frederick County 1970 1990		Baltimore 1970 1990		Sub. Washington 1970 1990		South. Maryland 1970 1990		U. Eastern Shore 1970 1990		L. Eastern Shore 1970 1990	
Attending Outdoor Concerts	88.9	195.2	1654.1	3615.0	927.3	2027.1	36.6	80.2	45.3	97.6	41.8	92.4
Attending Outdoor Sports	276.4	470.4	11466.0	19224.7	3698.5	6271.0	441.0	746.8	276.4	470.4	261.7	441.0
Bicycling	306.0	413.6	1081.7	1989.7	1187.1	2149.0	107.6	164.8	127.8	181.6	121.1	164.8
Boating	103.7	216.5	4229.2	8785.8	2444.7	4076.8	1326.1	2755.8	1107.8	2299.2	1233.3	2559.3
Camping	1902.3	4245.3	378.4	846.2	663.4	1457.8	515.6	1151.8	205.8	461.5	736.0	1642.2
Driving for Pleasure	3694.7	6156.6	19247.6	32056.1	24688.7	41114.8	8438.7	14052.3	6905.1	11498.6	6765.6	11267.5
Fishing	2103.9	3055.8	1866.8	2709.5	2615.0	3796.6	1724.2	2502.1	1783.5	2589.1	1794.6	2605.8
Hiking	362.1	775.0	506.5	1082.1	657.0	1012.9	309.2	663.1	351.9	750.5	179.0	382.4
Horseback Riding	672.4	1218.0	1740.4	3152.3	1810.2	3276.5	793.9	1437.8	540.5	977.5	243.1	442.2
Hunting	2064.2	3045.8	393.8	580.1	133.9	195.9	1024.3	1511.3	1185.3	1749.9	983.6	1451.1
Ice Skating	284.6	535.5	614.0	1155.7	513.1	967.0	127.5	239.7	185.6	349.9	96.9	181.6
Nature Walks	726.8	1133.0	6212.9	10120.8	3628.9	7558.8	271.6	484.5	332.8	616.6	298.5	452.5
Picnicking	3164.4	5455.6	9590.3	16538.9	10053.6	17333.9	2956.3	6820.3	3195.7	5511.9	2998.5	4170.8
Playing Outdoor Sports	5439.0	7947.1	51416.9	79552.1	31313.4	61045.8	1877.0	3106.6	2472.3	3822.3	2166.5	3135.9
Sightseeing	2509.0	4698.6	7708.4	14438.3	4989.9	9346.2	3009.8	5636.3	4013.9	7516.8	4172.3	7813.2
Sledding & Tobogganing	378.8	636.2	4556.7	7896.1	2762.8	6077.5	120.3	236.0	142.7	249.5	124.8	203.4
Snow Skiing	600.8	1361.3	122.6	277.9	225.0	507.4	15.8	31.5	1.1	2.3	0	0
Swimming Beach	104.0	215.7	3886.7	8090.5	2470.4	5142.4	3195.9	6652.4	256.8	5358.2	5043.6	1050.6
Swimming Pool	989.8	1810.1	9198.6	17560.0	5303.7	12983.6	363.0	716.4	426.3	821.5	423.9	772.5
Walking for Pleasure	8242.7	13399.1	68845.7	117222.4	40506.2	88250.0	2825.8	5197.3	3548.0	6098.3	3544.3	5755.8
Water Skiing	60.6	158.8	714.7	1875.0	258.4	678.4	586.9	1539.8	258.4	664.9	539.7	1418.7
TOTALS	34075.1	57143.2	206432.0	349769.2	140851.2	276269.4	31067.1	55726.8	27357.6	52088.0	31758.8	56463.9

* Figures are rounded to the nearest hundred.

Note: In-State Demand is the demand exerted upon a given county or region by Maryland residents regardless of the participants' place of residence.

* Figures are rounded to the nearest hundred.

Note: In-State Demand is the demand exerted upon a given county or region by Maryland residents regardless of the participants' place of residence.

Table 10 PERCENT OUT-OF-STATE DEMAND SUMMARY BY REGION				
Region	Out-of-state average % of total atten- dance ¹	% of Maryland residents going out-of- state ²	Net out-of- state demand as % of total demand	Out-of-State demand as % of in-state demand
Western Maryland	48	15	33	50
Baltimore	20	7	13	15
Suburban Washington	NA ³	—	17 ³	20
Southern Maryland	20	7	13	15
Upper Eastern Shore	31	5	26	35
Lower Eastern Shore	32	6	26	35

1 This represents the average of the percentages of out-of-state attendance compared to total attendance at each surveyed state park in each region. The figures are based on a 1965 state park attendance survey and estimates by Urban Research & Development Corporation.

2 Urban Research & Development Corporation estimates.

3 The 1965 State survey did not include parks in the Suburban Washington Region. The Suburban Washington estimate of net out-of-state demand is based on comparable figures of 18.6 percent, 15.3 percent and 5.5 percent for three regional parks (Cabin John, Wheaton and Clinton respectively) in the Suburban Washington Region.

SUMMARY OF TOTAL DEMAND (IN-STATE, OUT-OF-STATE)

The results of the in-state and out-of-state demand forecasts are totalled to produce Tables 12 & 13, which summarize total annual and peak season demand forecasts by region and activity for 1970 and 1990 respectively.



TABLE 11

SUMMARY OF ANNUAL OUT-OF-STATE DEMAND BY REGION AND ACTIVITY — 1970 and 1990¹ (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Attending Outdoor Concerts	45.3	97.6	247.5	542.1	184.8	406.1	5.2	12.1	15.7	34.9	13.9	31.4
Attending Outdoor Sports	138.2	235.2	1699.3	2884.1	740.9	1255.4	64.7	111.7	97.0	164.6	91.1	155.8
Bicycling												
Boating	52.8	109.1	634.8	1317.0	489.3	985.9	198.3	412.9	387.4	804.0	431.1	896.8
Camping	950.1	2122.7	56.1	126.8	312.3	551.6	76.9	172.6	72.8	162.2	257.8	573.8
Driving for Pleasure	1849.2	3078.3	2887.5	4810.1	4938.5	8222.2	1264.8	2109.7	2417.9	4024.9	2366.5	3944.2
Fishing	1051.9	1527.9	279.7	405.6	522.3	759.3	259.3	376.0	624.1	905.6	627.8	913.0
Hiking	181.0	386.5	75.3	162.7	93.6	203.4	46.8	100.0	122.0	262.4	63.1	134.2
Horseback Riding	336.2	610.3	261.2	473.2	362.0	654.3	199.0	214.6	188.8	352.4	85.3	155.2
Hunting	1032.1	1522.9	58.2	87.3	27.2	38.8	153.3	227.0	415.2	613.0	343.4	508.3
Ice Skating	141.8	267.2	91.8	173.4	103.0	193.8	19.4	35.7	64.3	122.4	33.7	63.2
Nature Walks												
Picnicking	1580.7	2729.4	1439.8	2482.1	2009.5	3455.5	594.7	1023.5	1117.4	1928.1	1048.6	1809.1
Playing Outdoor Sports												
Sightseeing	1254.5	2348.0	1157.4	2166.6	999.0	1870.3	452.2	845.7	1405.3	2361.7	1458.9	2733.9
Sledding & Tobogganing												
Snow Skiing	300.4	680.6	18.0	41.6	45.0	101.3				1.1		
Swimming Beach	51.4	107.9	582.9	1213.3	494.3	1028.5	478.9	997.7	89.9	1875.9	1765.5	3674.8
Swimming Pool												
Walking for Pleasure												
Water Skiing	29.6	79.4	107.7	281.3	25.6	135.9	87.5	228.8	887.0	232.9	189.8	496.7
TOTALS	8995.2	15903.0	9597.2	17167.2	11147.3	19562.3	3822.0	6868.1	7905.8	13835.1	8776.5	16090.4

* Figures are rounded to the nearest hundreds.

1 The total number of occasions of participation of out-of-state residents in Maryland within each region.

TABLE 12

SUMMARY OF TOTAL IN-STATE AND OUT-OF-STATE ANNUAL & PEAK SEASON DEMAND OCCASIONS BY REGION AND ACTIVITY FOR 1970 (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Attending Outdoor Concerts	134.2	77.0	1901.6	1090.0	1112.0	638.0	41.9	24.0	61.0	35.0	55.8	32.0
Attending Outdoor Sports	414.5	141.0	13165.3	4478.0	4439.4	1510.0	505.7	172.0	373.4	127.0	352.8	120.0
Bicycling	306.0	91.0	2081.7	619.0	1187.1	353.0	107.6	32.0	127.8	38.0	121.1	36.0
Boating	156.4	86.0	4864.0	2674.0	2934.0	1613.0	1524.3	838.0	1495.2	822.0	1664.4	915.0
Camping	2852.4	1372.0	434.5	209.0	975.7	625.0	592.5	285.0	278.6	134.0	993.8	478.0
Driving for Pleasure	5543.9	1511.0	22135.1	6033.0	29627.2	8075.0	9704.5	2645.0	9322.9	2541.0	9132.1	1489.0
Fishing	3155.8	1704.0	2146.5	1159.0	3137.3	1694.0	1983.5	1071.0	2407.6	1300.0	2422.4	1308.0
Hiking	543.1	267.0	581.7	286.0	750.5	369.0	356.0	175.0	473.9	233.0	242.0	119.0
Horseback Riding	1008.5	390.0	2001.6	774.0	2172.2	840.0	912.9	353.0	729.3	282.0	328.4	237.0
Hunting	3096.2	1596.0	452.0	233.0	161.0	183.0	1177.6	607.0	1600.5	825.0	1327.0	684.0
Ice Skating	426.4	418.0	705.8	692.0	616.1	604.0	146.9	144.0	250.9	246.0	130.6	128.0
Nature Walks	726.8	297.0	6212.9	2539.0	3628.9	1483.0	271.6	111.0	332.8	136.0	298.5	122.0
Picnicking	4745.1	1516.0	11030.1	3524.0	12063.0	3854.0	4551.0	1454.0	4313.1	1378.0	4047.1	1293.0
Playing Outdoor Sports	5439.0	1672.0	51416.9	15806.0	31313.4	9626.0	1877.0	577.0	2472.3	760.0	2166.5	666.0
Sightseeing	3763.5	1473.0	8865.9	3470.0	5988.9	2344.0	3462.0	1355.0	5419.2	2121.0	5631.2	2204.0
Sledding & Tobogganing	378.8	337.0	4556.7	3995.0	2762.8	2458.0	120.3	107.0	142.7	127.0	125.8	211.0
Snow Skiing	901.1	801.0	140.6	125.0	270.0	240.0	15.8	0	1.1	1.0	0	0
Swimming Beach	155.4	121.0	4469.6	3481.0	2964.8	2309.0	3674.8	2862.0	346.7	2700.0	6809.1	5303.0
Swimming Pool	989.8	829.0	9198.6	7164.0	5303.7	4442.0	363.0	304.0	426.3	357.0	523.9	355.0
Walking for Pleasure	8242.7	2214.0	68845.7	18492.0	40506.2	10880.0	2825.8	759.0	3548.0	953.0	3544.3	952.0
Water Skiing	90.2	67.0	822.4	611.0	284.0	211.0	674.3	501.0	1140.1	245.0	729.5	542.0
TOTAL	43069.8	16980.0	216029.2	77455.0	151898.2	53951.0	34889.0	14376.0	35263.4	15370.0	40545.3	17984.0

*Figures are rounded to the nearest hundreds.

TABLE 13
SUMMARY OF TOTAL IN-STATE AND OUT-OF-STATE ANNUAL & PEAK SEASON DEMAND OCCASIONS BY REGION AND ACTIVITY FOR 1990 (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Attending Outdoor Concerts	292.8	168.0	4157.1	2385.0	2433.2	1396.0	92.4	53.0	132.5	76.0	123.8	71.0
Attending Outdoor Sports	705.6	240.0	22108.8	7520.0	7526.4	2560.0	858.5	292.0	635.0	216.0	596.8	203.0
Bicycling	413.6	123.0	2989.7	889.0	2149.0	639.0	164.8	49.0	181.6	54.0	164.8	49.0
Boating	325.6	179.0	10102.7	554.0	6062.7	3333.0	3168.7	1742.0	3103.2	1706.0	4566.1	1900.0
Camping	6368.0	3063.0	973.0	468.0	1909.4	1226.0	1324.3	637.0	623.7	300.0	2216.2	1066.0
Driving for Pleasure	9234.9	2517.0	36866.1	10048.0	49337.0	13447.0	16161.9	4405.0	15523.5	4231.0	15211.7	4146.0
Fishing	4583.7	2475.0	3115.1	1682.0	4555.9	2460.0	2878.0	1554.0	3494.7	1887.0	3518.8	1900.0
Hiking	1161.4	571.0	1244.8	612.0	1216.3	598.0	762.8	375.0	1012.9	498.0	516.6	254.0
Horseback Riding	1828.3	707.0	3625.6	1402.0	3930.7	1520.0	1652.5	639.0	1318.9	510.0	597.4	231.0
Hunting	4568.7	2355.0	667.4	344.0	234.7	221.0	1738.2	896.0	2362.9	1218.0	1959.4	1010.0
Ice Skating	802.7	787.0	1329.1	1303.0	1160.8	1138.0	275.4	270.0	472.3	463.0	244.8	240.0
Nature Walks	1133.0	463.0	10120.8	4136.0	7558.8	3089.0	484.5	198.0	616.6	252.0	462.5	189.0
Picnicking	8185.0	2615.0	19021.0	6077.0	20789.5	6641.0	7843.8	2506.0	7440.0	2377.0	6979.9	2230.0
Playing Outdoor Sports	7947.1	2443.0	79552.1	24455.0	61045.8	18766.0	3106.6	955.0	3822.3	1175.0	3135.9	964.0
Sightseeing	7046.7	2758.0	16604.9	6499.0	11216.5	4390.0	6481.0	2537.0	9878.5	3972.0	10547.0	4128.0
Sledding & Tobogganing	636.2	566.0	7896.1	7560.0	6077.5	5407.0	236.0	210.0	249.5	222.0	203.4	181.0
Snow Skiing	2041.9	1815.0	319.5	284.0	608.6	542.0	31.5		3.4	3.0		
Swimming Beach	323.6	252.0	9303.9	7246.0	6170.9	4806.0	7650.1	5958.0	7234.1	5634.0	14175.4	11040.0
Swimming Pool	1810.1	1510.0	17560.0	13676.0	12983.6	10874.0	716.4	600.0	821.5	688.0	772.5	647.0
Walking for Pleasure	13399.1	3599.0	117222.4	31486.0	88250.0	23704.0	5197.3	1396.0	6098.3	1638.0	5755.8	1546.0
Water Skiing	238.2	177.0	2156.3	1602.0	814.3	605.0	1768.6	1314.0	897.8	667.0	1915.4	1523.0
TOTALS	73046.2	29383.0	366936.4	135228.0	295631.6	106762.0	62594.3	26586.0	64923.2	27787.0	72554.2	33418.0

* Figures are rounded to the nearest hundreds.

INTERSTATE RECREATION

Maryland residents travel to recreational facilities in adjacent states, particularly those within 60 to 75 miles of Maryland's major urban centers, just as people from other states come here for recreation. Planning for future open space and outdoor recreation areas must, therefore, be coordinated with adjacent states. Maryland recognizes that each state cannot be recreationally self-sufficient.

Adjacent states were contacted and copies of their outdoor recreation plans were obtained. The accompanying map shows the locations and types of existing and planned parks in adjacent states that have or will have dramatic influence on Maryland; they are considered in preparing open space and recreation policies for Maryland.

DELAWARE

Delaware's ten state parks have varying degrees of attraction for Maryland residents. The ecological value of woodlands and wetlands is considered the most compelling reason for preserving these areas.

Many Marylanders are attracted to the Delaware seashore and Cape Henlopen State Park, largely because Maryland's seashore is limited. This beautiful sandy beach continues south to Assateague Island, Virginia, and becomes a haven between late Spring and early Fall. The Delaware Plan indicates plans for expanding the Cape Henlopen State Park from 1,641 acres to 3,641 acres and for developing a minimum of 20 self-contained bay and ocean-oriented bathing centers, with fishing and boating activities along the bay front.

The Trap Pond State Park, although it is the most remote from Delaware's major urban centers, is the most highly developed park in the entire State system. Existing and proposed development emphasizes group use and extended-stay use. Plans call for expanding the park from its 965 acres to 2,520 acres. Trap Pond is only three miles

from the Maryland State line and is very popular among Maryland residents.

The demand for seashore park facilities is doubling about once every two or three years.

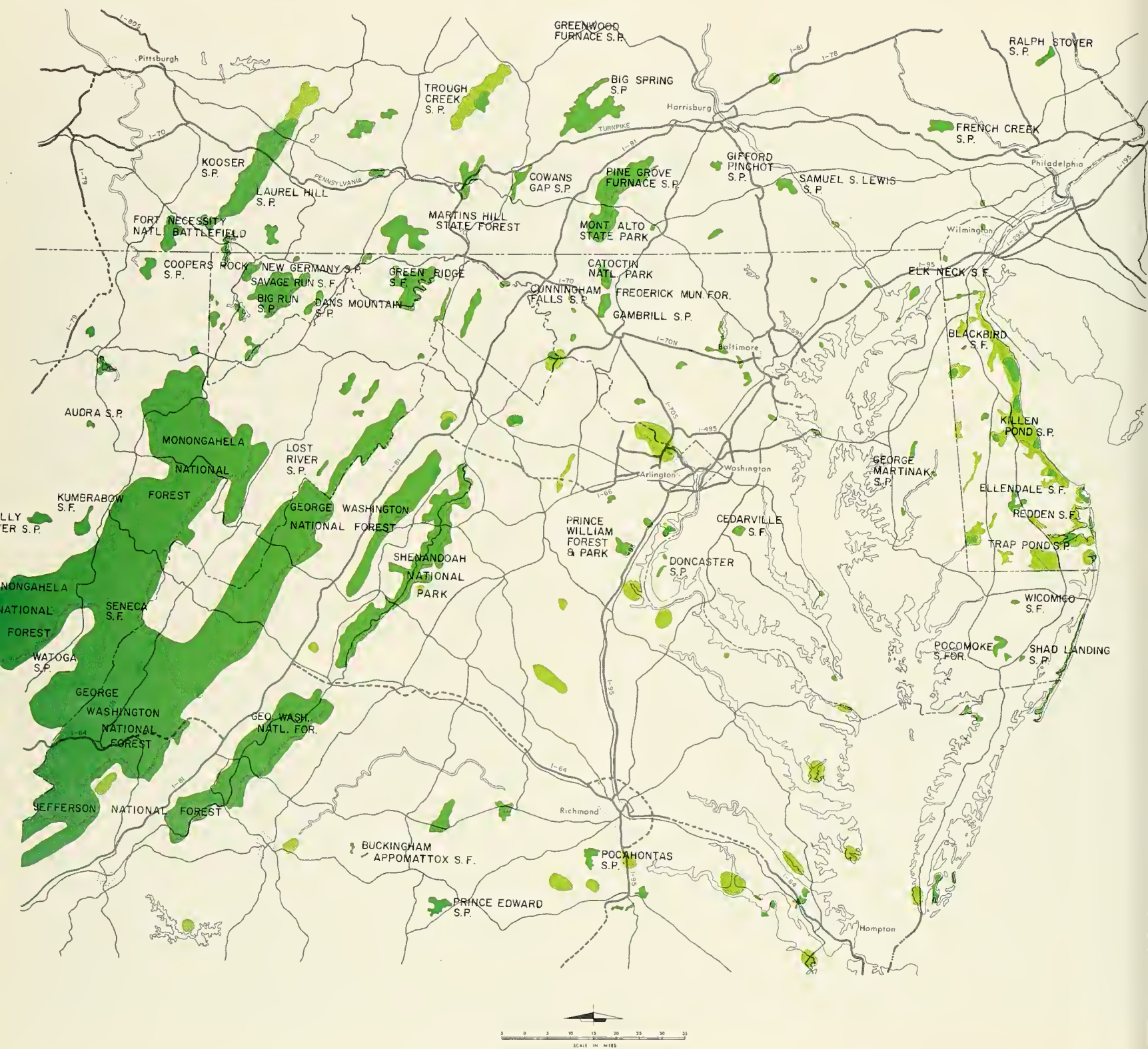
PENNSYLVANIA

Pennsylvania, the largest of the adjacent states, has an extensive park system. Twenty-three of Pennsylvania's 76 state parks are located within 60 miles of the Maryland State Line.

A 1967 State Park Survey sponsored by the Pennsylvania Department of Forests and Parks shows that the most significant use by Maryland residents is in the four major parks that form an arc north of the Baltimore Region — S. S. Lewis, Gifford Pinchot, Pine Grove Furnace and Caledonia. The added attraction of the popular Gettysburg National Military Park makes this area of Pennsylvania the most popular for Marylanders. The relatively new 3,300 acre Codorus State Park, not surveyed in 1967, has a 1,275 acre lake, making this portion of Pennsylvania even more attractive, particularly for residents in the Baltimore Region. All of these parks are within approximately 70 miles from downtown Baltimore.

Although not as close to Maryland's major population centers, there are additional recreation areas in Pennsylvania that will undoubtedly become more popular to Marylanders, particularly from Western Maryland. For some day-use and considerable extended-stay use, Ohio's Lake Erie, directly north of the Maryland-Virginia boundary, and the enormous Raystown Dam and reservoir complex northwest of Hagerstown are attractive to Marylanders. The Youghiogheny River Reservoir, which had one million visitors in 1965, is in the general area

INTERSTATE RECREATION



of Ohiopyle and extends into Garrett County to become an added attraction to this portion of Maryland and Pennsylvania.

VIRGINIA

Historic sites and other areas in Virginia attract thousands of Marylanders. Parks being developed will provide additional attractions to many Suburban Washington and Washington, D. C. residents. The George Washington Memorial Parkway that parallels the great Potomac River — one of the prime open space features in the Washington Region — provides excellent vistas of the river and access to fine riverside recreation developments such as the Great Falls River Bend Complex, to be enlarged and improved. Mason's Neck, a new State Park for which land is being acquired along the Potomac, will become a regional-state-Federal complex which will provide recreation facilities and a federal wildlife region. Prince William Forest Park, maintained by the National Park Service, is 22 miles square and within an hour's drive of three million people. It is one of the largest and one of the most important forests in the metropolitan area. The Manassas National Battlefield Park and Harpers Ferry are only two of the many historic attractions.

Maryland shall continue to work closely with the Metropolitan Washington Council of Governments to seek solutions to the need for more recreation opportunities in the Suburban Washington Region. It is in the Metropolitan Washington Area that the State must concentrate its effort to coordinate programs between Virginia and Maryland.

WEST VIRGINIA

Maryland residents who visit West Virginia Parks are primarily from Hagerstown and west to Garrett County.

The 817,000 acre Monongahela National Forest and the 100,300 acre George Washington National Forest clearly dominate the open space and outdoor recreation areas relatively close to Maryland. Some of West Virginia's largest parks, with excellent facilities, are also located in the area of the State closest to Maryland. These include the 6,115 acre Cacapon State Park approximately 30 miles southeast of Cumberland, and the 6,686 acre Canaan Valley State Park in the northern portion of the Monongahela National Forest. Sleepy Creek public hunting and fishing area, only 18 miles east of Cacapon State Park, is 22,300 acres and is the largest designated wildlife preserve in the entire state of West Virginia.

The proximity of Cacapon and Canaan Valley, two of West Virginia's finest state parks, must be given strong consideration in future land acquisition and development programs for recreation in this Western Maryland Region.



*"He that will make a good use of any part of his life must
allow a large part of it to recreation."*

Locke



NEED

In the previous section, demand for recreation facilities was studied in light of the human need to recreate by enjoying outdoor activities. In this section, we explore the nature, extent and general location of demands for recreation, and the general future need for land and facilities to satisfy demands as forecast.

DETERMINATION OF DESIGN DAY FORECASTS

In order to make the demand forecasts more meaningful to those responsible for providing recreation and open space, the total demand figures have been converted to "design day" number of occasions. A design day is a single, hypothetical day selected for use in planning and designing recreation and open space facilities. Simply, it is the day in a future "target" year for which facilities should be designed to meet forecasted usage.

Several assumptions have been made in deciding upon the most appropriate design day.

- The design day will occur in the peak season for each recreation activity.
- The design day will not be the day of highest attendance in the peak season.
- The State's annual records on state park attendance are valid.
- The attendance records at Maryland State Parks for 1968 and 1969 reflect attendance patterns at other recreation areas in the State. Attendance patterns vary slightly from year to year because of weather.
- The season at Maryland State Parks is from the last Sunday before the Memorial Day holiday in May to the Sunday after the Labor Day holiday in September.

Based upon prior experience, determinations by the Baltimore Regional Planning Council, and a study of Maryland State Park attendance records, the fifth highest attendance day in a peak season was selected as the design day.

Research shows that attendance on the fifth highest day ranges from 1.94 times to 4.02 times average daily attendance in the peak season. This fairly wide range, combined with the inconsistencies between 1968 and 1969 design day factors for each representative park, led to a factor of 2.75 for use in determining future design day demand. Maryland State Park attendance figures are used for six representative parks — Patapsco, Cedarville, Greenbrier, Assateague, Point Lookout and Herrington Manor.

The design day factor (2.75) was applied to the calculated average daily number of occasions in each recreation activity forecasted for the years 1970, 1980, 1990 and 2000. The 1970 and 1990 results presented in Table 14 are deemed most appropriate for use in this study.

GUIDELINES FOR DETERMINING NEEDS

The design day figures tell us the nature, extent and general location of future recreation occasions. To make the demand figures more meaningful to those responsible for supplying land and facilities, demand figures must be transformed into land and facility requirements.

Caution is urged in attempting to use rigid standards for acreages and facilities under a variety of circumstances. The nature of the land, people's needs in a particular area, and budget constraints transcend applications of a single standard.

TABLE 14
PEAK SEASON DESIGN DAY OCCASIONS BY ACTIVITY AND REGION — 1970 and 1990

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Attending Outdoor Concerts	2302	5022	32622	71291	19071	41729	718	1584	1045	2271	957	2123
Attending Outdoor Sports	4216	7175	133854	224782	45136	76522	5143	8729	3795	6457	3586	6069
Bicycling	2720	3677	18502	26573	10552	10102	957	1466	1136	1614	1075	1466
Boating	2571	5352	79929	166018	48216	99627	25050	52071	24571	50996	27352	56793
Camping	41011	91559	6248	13989	9716	21700	8520	19041	4007	8968	14289	32864
Driving for Pleasure	45166	75237	180334	300347	241373	401951	79063	131673	75955	116470	74399	123929
Fishing	50936	73981	34645	50278	50636	73532	32013	46450	38858	56405	39097	56793
Hiking	7981	17069	8550	18293	11030	17875	5231	11209	5352	14886	3556	7593
Horseback Riding	11657	21134	23136	41907	25108	45436	10552	19102	8329	15243	3795	6905
Hunting	47707	70395	6966	10282	2481	3616	18154	26782	24659	36407	20446	30190
Ice Skating	12593	23524	20686	38948	18054	34018	4304	8071	7354	24238	3825	7175
Nature Walks	8877	13841	75895	123682	44330	92334	3319	5918	4065	7532	3647	5649
Picnicking	45315	78166	105336	181649	115200	198539	43461	74907	41190	71052	38649	66657
Playing Outdoor Sports	49979	73014	472464	730991	287735	560942	17248	28545	22718	35123	19307	28815
Sightseeing	44030	82440	103725	194266	70064	131225	40502	75834	63399	118729	65882	123393
Sledding & Tobogganing	10073	16918	119416	225979	73472	161623	3198	6278	3795	6636	3319	5409
Snow Skiing	23944	54252	3737	8489	7175	16170			30	92		
Swimming Beach	3616	7532	104052	216593	69020	143657	85550	178093	80707	168407	158513	330000
Swimming Pool	24780	45136	214143	408796	132778	325039	9086	17936	10670	20565	10612	19341
Walking for Pleasure	66179	107580	552753	941160	325218	708546	22688	41729	28487	48961	18457	46211
Water Skiing	2002	5291	182663	47886	6306	18084	14977	39278	7593	19938	16200	42534

- Standards shall be referred to as "guidelines" to emphasize that although some "rule of thumb" must be used, the standards herein are not recommendations, but tools to help make some reasonable determinations of future recreation and open space requirements.
- The methods used in forecasting demand are designed to be sensitive to physiographic and socio-economic differences between counties and regions.
- Guidelines (standards) for at least 12 different states and a number of professional and operating agencies and research groups were inventoried and analyzed. Guidelines were then chosen and modified for use in Maryland.

The following guidelines are deemed most suitable for Maryland and are used here to determine total land and facility requirements and deficits for the State and its regions.

- Swimming (Pool) — 2,178 swimmers per acre per day
- Swimming (Beaches) — 290 swimmers per acre per day
- Picnicking — 60 people per acre per day in rural and 120 people per acre per day in urban areas
- Camping — 31.5 campers per acre per day
- Horseback Riding — 35 people per mile per day
- Boating — 1.4 persons per acre per day
- Ice Skating — 250 persons per acre per day
- Water Skiing — 0.65 persons per acre per day
- Nature Walks — 150 persons per mile per day
- Walking for Pleasure — 400 persons per mile per day in urban areas and 200 persons per mile per day in rural areas

- Hiking — 8 persons per mile per day in urban areas and 2 persons per mile per day in rural areas
- Fishing — 120 fishermen per acre per year
- Driving for Pleasure and Sightseeing — 360 persons per mile per day
- Playing Outdoor Sports (i. e., playgrounds, baseball, etc.) — 50 persons per acre per day
- Attending Outdoor Sports Events — one person per seat per day
- Attending Outdoor Cultural Events — one person per seat per day
- Bicycling — 100 persons per mile per day
- Hunting — .15 hunter per acre per day
- Sledding and Tobogganing — 166 persons per acre per day
- Snow Skiing — 30 persons per acre per day. Rope tow capacity — 1,000 per day
- Snowmobiling — 30 persons per mile of trail per day
- Golf — 525 golfers per day on 9-hole courses, and 825 golfers per day on 18-hole courses
- Tennis — 16 persons per court per day

Because guidelines of this type do not remain constant over time, they should be re-evaluated and re-applied periodically to determine updated land and facility requirements. They should also be changed to reflect future guidelines for both traditional and new recreation facilities.

Guidelines presented for each activity assume that it will be provided independent from other activities. Combinations of activities and multiple use of land and facilities can necessitate adjustments to guidelines, based on individual circumstances.

Table 15
GENERAL RECREATION LAND REQUIREMENTS & DEFICITS FOR STATE & REGIONS
(In Acres for 1970 & 1990)*

Planning Regions	Requirements	Year 1970 Supply (1970)**	Deficit & Excess***	Requirements	Year 1990 Supply (1970)**	Deficit & Excess***
Western Maryland and Frederick Regions	29,859	135,825	+ 105,966	61,193	135,825	+ 74,632
Suburban Washington	64,725	22,075	- 42,650	125,355	22,075	- 103,280
Baltimore	89,494	50,805	- 38,689	174,850	50,805	- 124,045
Southern Maryland	37,340	7,258	- 30,082	76,401	7,258	- 69,143
Upper Eastern Shore	36,886	9,319	- 27,567	83,950	9,319	- 74,631
Lower Eastern Shore	34,147	10,051	- 24,096	69,577	10,051	- 59,526
State of Maryland	292,451	235,333	- 57,118	591,326	235,333	- 355,993

* Figures exclude wildlife management areas, hunting requirements and water surface area requirements because they tend to distort the total figures. Requirements and figures on hunting acreages and water surface acreage are presented for each of the regions as described within the chapter, Outdoor Recreation and Open Space Plan, starting on page 51.

** Based on Maryland Department of State Planning Recreation Inventory, conducted 1971.

*** Based on assumption that no new acres would be provided between 1970 and 1990.



GENERAL REQUIREMENTS

General land and/or facility requirements were determined by applying the guidelines to the "design day" occasions for each recreation activity and each forecast year. The resulting figures show that a total of about .6 million acres will be required by 1990. The figures in Table 15 exclude water surface acreage and hunting land. Exclusive of hunting acreage requirements, a total of 292,000 acres were required in 1970 and 591,000 acres will be required by 1990, a difference of 299,000 acres.

The deficit figures should be used with the following considerations:

- The partial lack of response to the inventory questionnaire and the incomplete nature of some questionnaires returned create gaps in existing land and facilities data and may exaggerate some deficit figures. Also, differences in levels and qualities of responses within regions and between regions may have caused some inconsistencies between regional deficits.
- Data on existing recreation acreage did not always include water surface area, hunting areas and other unique recreation acreages on a consistent basis from region to region.
- Specific guidelines (standards) may vary greatly from one portion of an area to another; thus as determinations of land and facilities become more detailed on the county and municipal level, the likelihood that deficits in this study do not truly reflect local needs becomes greater.
- Deficits do not consider the multiple use of sites to reduce acreage requirements.

Table 16
GENERAL RECREATION LAND REQUIREMENTS & DEFICITS FOR STATE & REGIONS INCLUDING WILDLIFE MANAGEMENT AREAS
(In Acres for 1970 & 1990)*

Planning Regions	Requirements	Year 1970 Supply (1970)**	Deficit & Excess***	Requirements	Year 1990 Supply (1970)**	Deficit & Excess***
Western Maryland and Frederick Regions	29,859	155,095	+ 125,236	61,193	155,095	+ 93,902
Suburban Washington	64,725	24,013	- 40,712	125,355	24,013	-101,342
Baltimore	89,494	51,414	- 38,080	174,850	51,414	- 123,436
Southern Maryland	37,340	8,129	- 29,211	76,401	8,129	- 68,272
Upper Eastern Shore	36,886	12,231	- 24,655	83,950	12,231	- 71,719
Lower Eastern Shore	34,147	73,362	+ 39,215	69,577	73,362	+ 3,785
State of Maryland	292,451	324,244	+ 31,793	591,326	324,244	-267,082

* Figures exclude hunting requirements and water surface area requirements because they tend to distort the total figures. Requirements and figures on hunting acreages and water surface acreage are presented for each of the regions as described within the chapter, Outdoor Recreation and Open Space Plan, starting on page 51.

** Based on Maryland Department of State Planning Recreation Inventory, conducted 1971.

*** Based on assumption that no new acres would be provided between 1970 and 1990.

**OUTDOOR RECREATION
& OPEN SPACE PLAN
A STATEWIDE PERSPECTIVE**

The Comprehensive Outdoor Recreation and Open Space Plan is based on the identification of unique natural features, extensive regional discussions, and projected demands for 1990. It reflects a recommended open space framework throughout Maryland and suggests activity centers to meet the state's outdoor recreation and open space needs.

STATEWIDE POLICIES AND RECOMMENDATIONS

Statewide policies were recommended in Phase I, the Concept Plan, to guide the State, other governmental agencies and private enterprise in providing open space and outdoor recreation areas. Agreement with nearly every policy was reached at regional meetings held by the Maryland Department of State Planning. Many of these policies provide the foundation for the Comprehensive Outdoor Recreation & Open Space Plan.

The Concept Plan policies were refined and the following seven policies and accompanying recommendations are set forth to provide guidelines for open space and outdoor recreation decisions for all levels of government and private enterprise. A major test of a proposal affecting open space or recreation should be the question: "Does it carry out the policies of the State's Comprehensive Outdoor Recreation & Open Space Plan?" Use of the statewide policies will help unify outdoor recreation and open space planning, programming, acquisition and development throughout Maryland.

I. PLAN AND LOCATE OPEN SPACE AND OUTDOOR RECREATION AREAS ACCORDING TO PEOPLE'S NEEDS.

1. Give high priority to the location of recreation areas within 45 minutes travel time of Baltimore and Washington, D. C., and within 30 minutes of an unincorporated area or town over 25,000 population.
2. Seek citizen involvement to help determine specific recreation needs.
3. Provide convenient facilities to meet the day-use needs of urban residents.
4. Provide a wide variety of State and local recreation facilities and programs tailored to the demand of each facility's service area.
5. Support the establishment of a Potomac National River for the preservation of scenic and historic values and as a national area for outdoor recreation.
6. Continue strong cooperation and coordination between the State and the regions in planning and developing future Federal, State and local facilities.

II. PROVIDE THE MAXIMUM POSSIBLE NUMBER OF OUTDOOR RECREATION OPPORTUNITIES.

1. Encourage low intensity recreation uses on open tracts such as flood plains, wooded areas, steep slopes, and other significant natural features, provided proper safeguards are taken to protect local environment.
2. Encourage the use of utility easements as potential outdoor recreation and open space areas.



3. Preserve historic structures and sites.
4. Utilize the recreation potential of waterbodies as well as agricultural research centers and wildlife management areas.
5. Provide access for inner-city families: state parks, major historic and cultural sites, significant natural areas and water-oriented public areas.
6. Encourage the multi-purpose use of recreation and conservation lands, provided an ecological balance can be maintained.
7. Encourage the construction of manmade lakes, where feasible, within or near the metropolitan centers; and acquire available surrounding land for picnicking, camping and other outdoor recreation opportunities.
8. Develop information programs to further the appreciation and understanding of Maryland's natural, cultural and historic resources.
9. Enforce water and air pollution control measures to preserve a healthful environment and to expand the recreation potential of the State.
10. Provide recreation facilities for the handicapped of all ages.
11. Encourage joint governmental ventures to provide facilities in major recreation areas.
12. Publicly acquire or control land with conservation or recreation value before encroaching development and rising land values preclude this possibility.
13. Provide public access to estuaries, the Chesapeake Bay, and every

major river in Maryland.

14. Analyze surplus state and federal properties to determine whether they can be used for recreation.
 15. Provide corridors for limited recreation uses such as bicycling, hiking, and others which relate to streams, shorelines and unique resource and historic areas.
 16. Where feasible, analyze and prepare site plans for opening reservoir sites to multi-purpose recreational use.
 17. Emphasize county and local development of community parks and school/park complexes to maximize local recreational opportunities.
 18. Promote tourism connected with recreation, scenic, historic and natural areas.
 19. Develop a system of interpretive centers at strategic locations to serve tourism, recreation and outdoor education purposes.
 20. Emphasize the location of recreation areas at water resource sites and areas of historic, geologic and ecologic interest.
- III. PRESERVE THE NATURAL CHARACTERISTICS OF LAND AND WATER.
1. Control land uses adjacent to parks and major scenic or historic sites to prevent urban encroachment.
 2. Protect freeflowing streams and rivers, and carefully evaluate proposed impoundments — especially in anadromous fish areas.
 3. Encourage the preservation of submerged lands for wildlife and fish habitats rather than draining them for development.



4. Control shoreline development along the Bay and the ocean.
5. Develop and implement a Statewide river and stream preservation and development program.
6. Encourage recreational use of the Chesapeake Bay by acquiring public access points, particularly at the confluence of stream valleys and the Bay.
7. Preserve outstanding natural and scenic areas, and irreplaceable historic sites and structures, and incorporate into an open space system.
8. Utilize excessive slopes, flood plains, poorly drained lands and other unique natural resources as major sources of open space.
9. Continue to emphasize nature interpretation and nature-oriented facilities.
10. Emphasize the acquisition of development rights along stream valleys, bay and river or ocean shoreline, and discourage development incompatible with the recreation opportunities associated with these resources.
11. Continue implementing legislation and protection programs for the Chesapeake Bay and inland wetlands with emphasis on appropriate land development regulations, conservation zoning, land donations and purchase of development rights in lieu of outright acquisition.
12. Regulate and preserve all off-shore islands wherever feasible for wilderness boat landing, conservation, and limited recreation use.

IV. EMPHASIZE THE PRESERVATION OF RARE PLANT AND ANIMAL FORMS AND EXTRAORDINARY HABITATS.

1. Create more wildlife sanctuaries and management areas in places that provide natural habitats.
 2. Enact and enforce strong legislation to protect fish and wildlife or to insure safe removal.
 3. Enforce strict soil conservation measures in areas being developed.
- #### V. USE A VARIETY OF METHODS TO PRESERVE AND ACQUIRE OPEN SPACE LANDS.
1. Encourage stewardship.
 2. Utilize scenic or conservation easements, preferential taxation and assessment, purchase and leaseback agreements and subdivision regulations.
 3. Endorse full funding of the Land & Water Conservation Fund.
 4. Encourage well planned new towns and a variety of development controls: cluster development, planned unit development and flood plain zoning.
 5. Reserve the best agricultural lands and geologic resource areas for continued production, or preservation as rural landscape, through regulatory measures.
 6. Encourage the use of both public and private lands for outdoor recreation, including the purchase of public recreation rights and scenic easements to expand open space beyond publicly owned land and encouraging land owners to provide recreational



opportunities for the public under multiple-use income-producing arrangements.

7. Streamline non-fee-simple acquisition techniques to provide more opportunities to implement open space and recreation programs.

VI. PROVIDE SCENIC ROADS AND TRAILS THAT ARE EFFICIENT AND ATTRACTIVE.

1. Develop a system of scenic roads incorporating historic, cultural and unusual geologic features of the State.
2. Establish an interconnecting system of walking, hiking and riding trails along the ocean beach, bays, estuaries, rivers and streams, linking activity centers.
3. Use scenic roads and trails to link park lands, conservation areas, scenic landscapes and historic and cultural sites.
4. Reevaluate the historic marker program.
5. Designate and expand the Potomac Heritage Trail along its entire length.

VII. ENCOURAGE A PARTNERSHIP BETWEEN PRIVATE ENTERPRISE AND GOVERNMENT TO CONSERVE AND DEVELOP NATURAL RESOURCES AND TO PROVIDE FACILITIES AND SERVICES FOR PUBLIC ENJOYMENT.

1. Educate private enterprise to provide quality services in or near State public recreation facilities.
2. Assist private enterprise in planning and managing facilities to meet recreation needs.

3. Develop guidelines for the attractive and economical location and design of facilities in or near areas of scenic and historic distinction.
4. Lease and develop some state park lands, through private enterprise, county and municipal agencies, for needed outdoor recreation facilities and programs.
5. Encourage the private sector to develop revenue-producing recreation facilities complimentary to the tourism attractions of the state and each region.

PLAN ORIENTATION

The outdoor recreation and open space framework in the Comprehensive Plan differs from that in the Concept Plan as a result of an updated and more detailed statewide natural land features inventory, described and depicted in Chapter II; and a statewide inventory of public and private recreation facilities throughout the State, undertaken by the Maryland Department of State Planning.

The Comprehensive Outdoor Recreation and Open Space Plan goes two significant steps beyond the Concept Plan. It identifies, for the first time, a statewide system of three types of significant recreation and open space areas that provides for recreation facilities, and provides a basis for implementing Statewide outdoor recreation and open space policies. These areas also begin to reflect Statewide settlement patterns which respect the landscape and natural land values. The Plan also indicates areas that should receive emphasis in future acquisition and development programs.

The three types of recreation and open space areas designated on the Comprehensive Plan Map are described below.

Activity Center

The most intensively developed recreation area, ranging from a large complex offering multi-purpose recreational opportunities to small pockets of intensive active recreation; these areas may also include areas of specialized recreation. The activity centers are not necessarily resource-based, although many may be located in or surrounded by natural areas of a limited use or conservation character. Activity centers would be developed harmoniously with the surrounding environment, and located near urban centers.

Limited Use Area

Areas developed at moderate intensity for such recreational activities as swimming, boating, tent camping, open field sports, and special purpose areas such as trails, historic landmarks and interpretive activities. These areas are unable to absorb as much activity as an Activity Center because of its delicate environment. Limited use areas may be intermittent and relatively small activity areas in an extended linear pattern or small concentrated areas with limited activities. These areas tend to be relatively narrow strips of open land following streams, rivers and other water bodies and ridges; oriented to nearby activity centers or places of unique natural-historic interest.

Conservation Area

Areas devoted to limited and scattered low intensity activities such as hiking, hunting, fishing, wilderness camping and nature study, where the environment is kept undisturbed. Man-made facilities are prohibited. The conservation areas are relatively broad, tending to parallel streams, rivers and ridges, and serving primarily to preserve and protect unique natural areas and to complement recreation areas. They include wetlands, steep slopes, flood plains, dense woodland and other areas of conservation significance.



The Comprehensive Plan designates areas within the framework that should be given particular emphasis in future federal, state, county and local programs. An "Area of Emphasis" was selected primarily because it is characterized by at least one of the following factors: located in an area with exclusive natural features required to provide recreation facilities that will help overcome recreation deficiencies in the Region, located in an area subject to considerable land development pressures and rapidly increasing land costs, located relatively close to population centers or being an ecologically scenic or historically significant area that is threatened. These four factors are not a substitute for a system to determine priorities for future acquisition and development activities. This system is described in Chapter VII, Implementation.

The Comprehensive Outdoor Recreation and Open Space Plan recognizes that many significant natural land features that comprise the statewide framework have limited potential for various recreation uses because of steep slopes, poor soils, wetlands and other physiographic constraints. Since flat land which is suitable for development, including recreation facilities, is largely excluded from the framework, the Plan recognizes that some potential recreation areas will fall outside the framework. Where this occurs, every effort should be made to incorporate the area into a portion of the framework. Furthermore, the potential area should comply with the statewide policies in the State Comprehensive Outdoor Recreation and Open Space Plan.

Small neighborhood and community parks which are people oriented, more than any other facility, may fall outside the framework. The Local Project Priority Evaluation System, described in Chapter VII, should be used to determine whether a local recreation and open space area should receive emphasis for acquisition or development.

PLAN DESCRIPTION

The Comprehensive Outdoor Recreation and Open Space Plan Map depicts a framework that all levels of government and private

enterprise should use in making decisions about areas of future open space preservation and outdoor recreation development. The three recreation and open space areas combine to create significant patterns that reflect natural feature characteristics and needed recreation facilities. The Conservation Areas indicate general areas that have the greatest physiographic constraints to development and that warrant preservation. While limited outdoor activities are recommended in these Conservation Areas to provide certain needed recreation opportunities, nature is unquestionably the dominant characteristic and must be respected. The Limited Use Areas provide environments in which natural features prevail, but limited recreation opportunities are recommended to help fulfill the significant recreation needs as indicated in the Demand Study.

The Activity Centers are located in areas that can provide needed recreation facilities. The concentration of these centers in the Baltimore-Washington Metropolitan Area and also near other urban centers throughout the State reflects the Plan's primary policy of providing more convenient outdoor recreation opportunities to the greatest number of people.




In Western Maryland, conservation areas prevail among the Region's numerous forested mountains and steep wooded ridges. Activity Centers are essentially limited to existing recreation areas, particularly the State Parks. A limited number of new Activity Centers are recommended primarily because of the expansion opportunities that exist in today's recreation areas, because of available open land in State Forests and the relatively sparse population within the Region.

The open space and recreation areas located along the Chesapeake Bay in the Southern Maryland, Upper Eastern Shore and Lower Eastern Shore Regions also indicate the Plan's emphasis on providing more opportunities to enjoy the Bay. Limited Use Areas and Activity Centers are also oriented to the numerous rivers and streams that border and penetrate into these regions — including the Potomac and Patuxent. Within these regions, emphasis is given to preserving and carefully utilizing their vast water resources. The importance of preserving the Eastern Shore's wetlands is also emphasized.



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NATURAL FEATURES

-  STEEP SLOPE
-  WOODLAND & BRUSHWOOD
-  UNIQUE NATURAL AREAS

Source:
U.S. Coast and Geodetic Survey, Maryland Department of State Planning

UNIQUE NATURAL AREAS

Maryland has a wide array of "unique natural areas" which the Technical Advisory Committee on Natural Areas in Maryland defines as areas where natural processes predominate and are not significantly influenced by man. These areas were inventoried and identified.

The location, size and configuration of these areas are depicted on the Natural Features Map. These unique natural areas include caves, geologic formations, beautiful valleys, vast wetlands and other significant natural resources that have vast potential open space and outdoor recreation value.

FISH AND WILDLIFE

Maryland's many different natural characteristics and conditions, from its rugged mountains to the Chesapeake Bay, create a variety of natural habitats.

The Chesapeake Bay and its tree-like estuaries provide one of the most fertile and varied marine habitats on the Atlantic Coast, with living space for nearly 300 different species of fish and shellfish. The differences in salt content from the lower to the upper reaches of the Chesapeake Bay, the saline Atlantic, and the fresh waters of Maryland's many rivers, streams and lakes accommodate the State's large and varied fish population.

Sport fish in the Chesapeake Bay include the bluefish, butterfish, catfish, bullhead, croaker, black drum and red drum, flounder, shad, Norfolk spot, rock, sea trout, and perch. The salt waters of the Atlantic Ocean add to the variety and include cod, sea herring, mackerel, porgy, sea bass, sturgeon and whiting. Off-shore from Ocean City, fishermen seek the white marlin.

Maryland's extensive system of waterways range from fast, cold rushing mountain streams in western Maryland to warm, slow-moving streams in the Coastal Plain area. The most common fresh water fish in Maryland are the yellow perch, sunfish, bass, trout, pickerel, bullhead, catfish and carp.

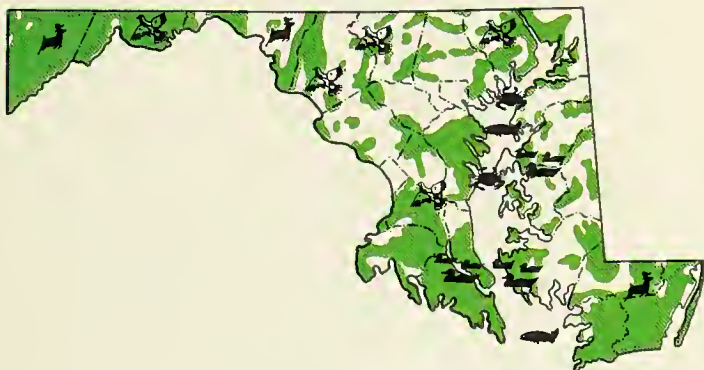
Wildlife, like aquatic life, is diverse and abounds throughout Maryland. From black bear, deer, turkey and small game to upland game birds and migratory wetland wildlife, the State is a hunting and observatory paradise. The Maryland Fish and Wildlife Administration has been very active in managing wildlife habitats.

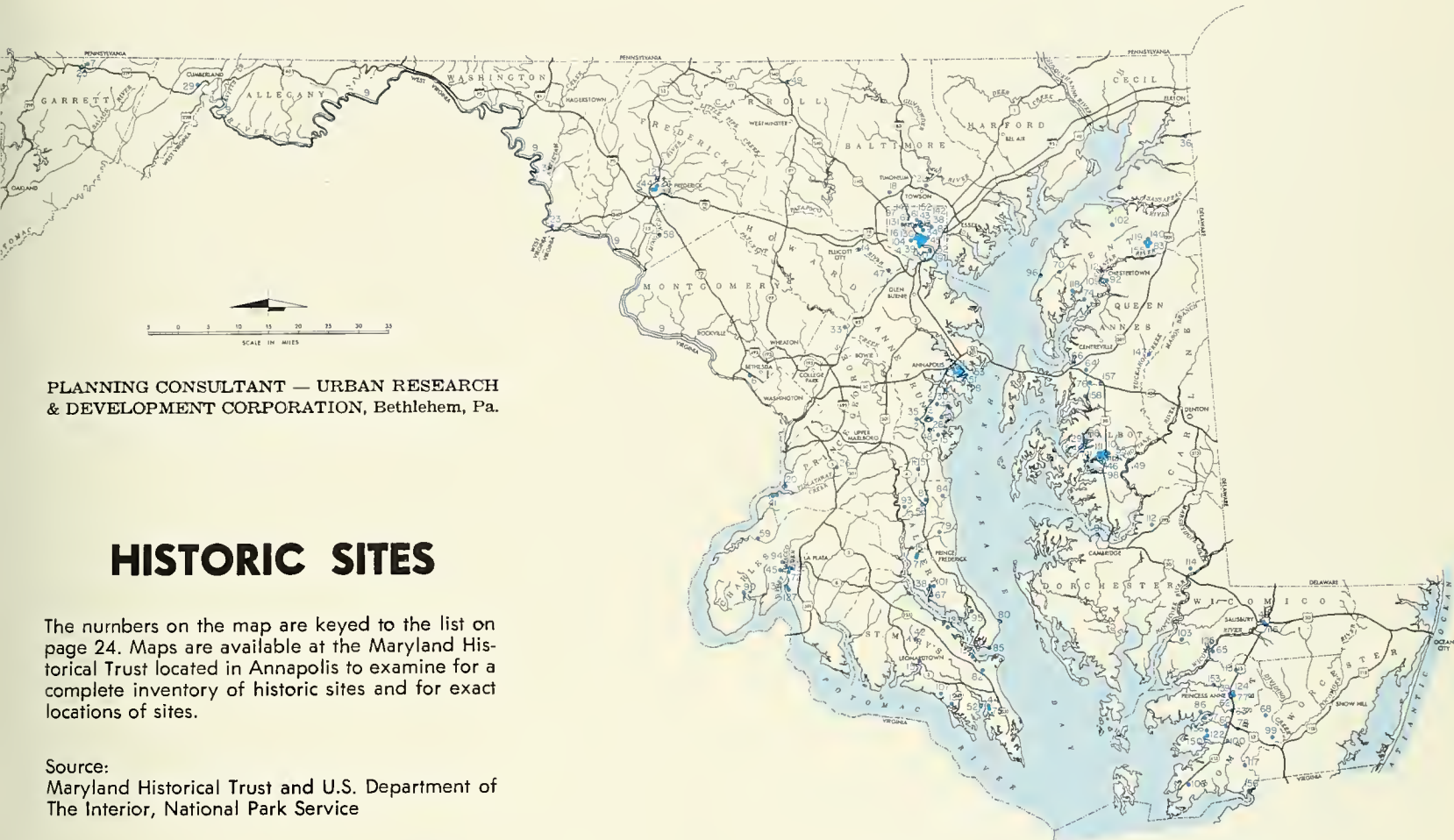
HISTORIC SITES

The creation of the Maryland Historical Trust and the inauguration of a Statewide Historic Preservation Plan sponsored by the Maryland Historical Trust and the Maryland Department of State Planning signify Maryland's goal of keeping alive the State's many significant historic structures and sites. The Historic Preservation Plan will seek to bridge the gap between historic preservation and the development programs of the twentieth century. The Plan, when complete, will recommend a broad range of action programs to make historic preservation a useful development tool — programs that will provide educational, cultural and economic benefits to our communities. The Statewide open space and outdoor recreation framework incorporates historic buildings and sites because of their educational, cultural and economic value.

Historic sites on the National Register of Historic Places and additional sites nominated for the Register are mapped. It is interesting that many of these historic sites relate closely to one basic natural feature: water. Water was an early form of transportation and has always been a necessity for human survival.

Taking historic places into consideration in planning open space areas represents a major step toward achieving consistent plans.





The following 56 places are listed in the National Register of Historic Places as of June 3, 1971. The Register is a publication administered by the Advisory Council on Historic Preservation and the National Park Service. The National Register was created under the National Historic Preservation Act of 1966.

- | | | |
|---|--|--|
| 1. Accokeek Creek Site | 19. Fort McHenry National Monument & Historic Shrine | 39. Peale's Baltimore Museum |
| 2. All Hallows' Church | 20. Fort Washington | 40. Demberton Hall |
| 3. Antietam National Battlefield Site | 21. Hammond-Harwood House | 41. Piscataway Park |
| 4. Baltimore & Ohio Transportation Museum and Mount Clare Station | 22. Hampton National Historic Site | 42. Resurrection Manor |
| 5. Brice House | 23. Harpers Ferry National Historic Site | 43. The Flag House |
| 7. Casselman's Bridge National Road | 24. Hessian Barracks | 44. St. Mary's City Historic District |
| 8. Cedar Park | 25. Fuller-Baker Log House | 45. Shot Tower |
| 9. Chesapeake & Ohio Canal National Historic Park | 26. His Lordship's Kindness | 46. The South River Club |
| 10. Chase-Lloyd House | 27. Larkin's Hill Farm | 47. Thomas Viaduct Baltimore & Ohio Railroad |
| 11. Colonial Annapolis Historic District | 28. Larkin's Hundred | 48. Tulip Hill |
| 12. Chestertown Historic District | 29. LaVale Tollgate House | 49. Homestead Zoning District |
| 13. Clifton Park Valve House | 30. London Town Publik House | 50. U. S. F. Constellation |
| 14. Ellicott City Station | 31. Maryland Statehouse | 51. U. S. Naval Academy |
| 15. Evergreen | 32. Mary's Mount | 52. West St. Mary's Manor |
| 16. Federal Hill Historic District | 33. Montpelier | 53. Whitehall |
| 17. Fells Point Historic District | 34. Mount Clare | 54. Wye House |
| 18. Fort Garrison | 35. Obligation | 55a. Queen City Hotel |
| | 36. Old Lock Pump House Chesapeake & Delaware Canal | 55b. Denton House |
| | 37. Old Roman Catholic Cathedral | |
| | 38. Otterbein Church | |

The following places are inventory nominations from the Maryland Historical Trust and the State of Maryland to the National Register of Historic Places for national acceptance and recognition. These existing historical architectural facilities and historical landmarks of places, buildings or sites of exceptional interest represent the State's cultural heritage over the years, beginning from Colonial days.

- | | | | |
|---------------------------------|------------------------------------|---|--|
| 55. Academy of the Arts | 81. Crooked Intent | 107. Mulberry Fields | 133. St. Richard's Manor |
| 56. All Saints Church | 82. Customs House (Calvert County) | 108. Myrtle Grove | 134. St. Thomas Manor |
| 57. Almodington | 83. Customs House (Kent County) | 109. No. 111 Queen | 135. Stag House |
| 58. Amelung House | 84. Dentzel Carousel | 110. No. 132 South Harrison | 136. Sutler's Conclusion |
| 59. Araby | 85. Drum Point Lighthouse | 111. No. 20 West Street | 137. Talbot County Historical Society |
| 60. Arlington | 86. Elmwood Farm | 112. Old House of the Hinges | 138. Taney Place |
| 61. Brooklandwood* | 87. Emery Jones House | 113. Old House on Tull | 139. Teackle Mansion |
| 62. Beckford | 88. Foxley Hall | 114. Old Trinity Church | 140. The Abbey, or The Hynson Ringgold |
| 63. Beverly | 89. Friends Meeting House | 115. Paca House and Gardens* | 141. The Anchorage |
| 64. Bloomingdale | 90. Friendship | 116. Poplar Hill | 142. The Battle Monument |
| 65. Bounds Lot | 91. Glasgow | 117. Rehobeth Presbyterian Church | 143. The First Unitarian Church* |
| 66. Bowlingley | 92. Godlington Manor* | 118. Reward | 144. The Federick Barracks |
| 67. Brooke Place Manor | 93. Grahame House | 119. River House or Denton House | 145. The Retreat |
| 68. Burton Cannon House | 94. Habrè De Venture* | 120. Rose Hill (Charles) | 146. Third Haven Meeting House |
| 69. Caton-Carroll Mansion | 95. Hill Farm | 121. Rose Hill (Frederick) | 147. Thomas House |
| 70. Caulk's Field | 96. Hinchingham | 122. Salisbury Plantation | 148. Trail Mansion |
| 71. Cedar Hill | 97. Homewood* | 123. Sotterly | 149. Troth's Fortune |
| 72. Chimney House | 98. Hughleitt-Henry House | 124. St. Andrew's Episcopal Church | 150. Tudor Hall (Somerset) |
| 73. Christ Church Parkish House | 99. Ivy Hall | 125. St. Bartholomew's Episcopal Church | 151. Tudor Hall (St. Mary's) |
| 74. Clark's Convenience | 100. Kingston Hall | 126. St. George's Church | 152. Washington Monument |
| 75. Clocker's Fancy | 101. La Vielle House | 127. St. Ignatius Church | 153. Waterloo (Alms House) |
| 76. Cloverfield | 102. Lamb's Meadow | 128. St. John's College | 154. Weems House |
| 77. Cooley House | 103. Long Hill | 129. St. John's Episcopal Church | 155. Widehall |
| 78. Corn Crib on Route 13 | 104. Lovely Lane Methodist Church | 130. St. Mary's Seminary Chapel* | 156. Williams Point Farm |
| 79. Cornhill | 105. Maidstone | 131. St. Paul's Episcopal Church | 157. Wye Mill |
| 80. Cove Point Lighthouse | 106. Makepeace | 132. St. Paul's Rectory | 158. Wye Plantation |

*Indicates places that, as of February 1972, have been placed on the National Register of Historic Places.

Additional National Historic Landmarks include: Basilica of the Assumption of the Blessed Virgin Mary, Carrollton Viaduct, Catocin Furnace Historic District, Doughoregan Manor, Edgar Allan Poe House, Greenfields, Hays-Heighe House, Mt. Vernon Place Historic District, Principio Furnace, Sandy Point Farm House, Sheppard and Enoch Pratt Hospital.

SUPPLY



STATEWIDE OUTDOOR RECREATION AND OPEN SPACE INVENTORY

Following analysis of the physiographic characteristics of Maryland, existing open space and outdoor recreation facilities were inventoried. This provided a basis for comparing existing areas with the natural features framework and with the needs indicated in the demand study, described in the following chapter. This comparison provided an understanding of the relationship that exists between the supply of recreation facilities and the demand being placed upon them.

The Department of State Planning undertook a statewide inventory of public and private recreation facilities. Questionnaires were sent to appropriate Federal, State, county and municipal agencies to insure up-to-date information on each facility. Questionnaires were also sent to private recreation enterprises.

Most questionnaires sent to governmental agencies and 20 percent of those sent to private facilities were returned. While total acreages by classification were indicated for recreation areas, fewer than 10 percent of the returned questionnaires provided information requested on the number and total area of various facilities at each site. This deficiency proved most unfortunate because figures calculated in the demand study for specific activities could not be compared to the facilities which exist. Consequently, a true assessment of specific activity needs could not be made.

The map on the opposite page shows the location of known recreation areas throughout the State. Nearly 325,000 acres are devoted to parks, forests, historic sites and wildlife management areas and refuges. The State owns the majority of this land.

The Western Maryland Region has a significant number of publicly-owned open space and recreation areas. This Region has 60 percent of the State-owned open space and recreation lands.

The Baltimore and Suburban Washington Regions have 85 percent of the State's population. While the Suburban Washington Region has significant open space and stream valley recreation systems, the need is great to provide additional open space and recreation areas in this vast urbanizing complex.

The Southern Maryland and two Eastern Shore Regions have well-distributed open space and recreation areas. Although the open space pattern is considerable in the Eastern Shore Regions, particularly the Lower Eastern Shore, nearly 90 percent of the open space acreage is in sizeable wildlife management areas that have limited intensive recreational use potential; their true value is for open space.

The number of acres of land at each recreation site was classified into one or more of 10 categories devised to conform with the Federal Bureau of Outdoor Recreation classification system. This system permits comparison of the quantity of Maryland open space and recreation lands with that of other states, and permits identification of the lands' natural advantages and limitations.

The following table summarizes the number of acres in each classification by Federal, State, local and private ownerships for each of the regions. This information provides a perspective of the dominant character of recreation areas within each region and the prominent provider of the open space and recreation areas.

DEMAND

OUTDOOR RECREATION DEMANDS & REQUIREMENTS
PURPOSE

The primary purpose of this section is to make realistic forecasts of the demand for various types of recreation activities in Maryland's counties and regions. The major objectives are to analyze and determine the impact of socio-economic characteristics and trends on recreation patterns and the participation patterns of residents and non-residents. In this report, two major demand categories are used as a basis for determining total demand:

- 1. In-State Demand — exerted upon each county and region by its residents (county resident demand) and by all other Maryland residents (inter-county demand).
- 2. Out-of-State Demand — exerted upon each region in Maryland by out-of-state users.

The approach to studying demand presented here is oriented to human needs for outdoor recreational facilities. Although 21 popular outdoor activities are dealt with, the State of Maryland cannot assume responsibility for meeting all demand for all activities. Data are from Federal, state, municipal and private sources and include data on population characteristics, human preferences, demand levels and park attendance.

The primary factors used in determining future outdoor recreation demand in Maryland include natural features and resources, age, family income, resident population size, inter-state and inter-regional recreation, time and distance of travel, existing conditions and changing patterns. Through the analysis and application of these factors, demand forecasts for 21 recreation activities are made to the years 1970, 1980, 1990 and 2000; the 1970 and 1990 forecasts are presented in this report. Table 4 lists and briefly describes the 21 activities.

The following sections describe the procedures, assumptions and results of the demand study. Total land and facility requirements are presented as a basis for developing plan recommendations.

IN-STATE DEMAND
COUNTY & REGIONAL RESIDENT DEMAND
BASIC PROCEDURES

Recreation demand is expressed in "number of occasions" (the number of separate times people engage in recreational activity). The total number of occasions is determined by multiplying the percent of the population which participates in a recreation activity (the participation rate) by the number of times an average person participates in the activity over a season.

The survey of recreational demand for the United States, prepared under the auspices of the Outdoor Recreation Resources Review Commission (ORRRC) is utilized. Other sources have been used, chiefly to discern Maryland's population characteristics, income levels and living patterns in 1970. The 1970 U. S. Census of Population data were assembled by the Maryland Department of State Planning to show age distribution and households by location; and a recent edition of Sales Management, a marketing journal, was used as the primary source of income information.

ASSUMPTIONS

Because this study relies upon data from one source to derive other relationships and to reflect trends, the following major assumptions are made:

- Socio-economic characteristics of people determine their recreation patterns, notably those of choice demand and frequency.

Table 4
RECREATION ACTIVITIES USED

ACTIVITY CATEGORIES	EXAMPLES OF ACTIVITY TYPES
ATTENDING OUTDOOR CULTURAL EVENTS	Attending outdoor concerts, outdoor plays, outdoor art exhibits
ATTENDING OUTDOOR SPORTS EVENTS	Attending outdoor baseball games, football games, tennis matches, soccer matches, golf tournaments.
BICYCLING	Bicycling for pleasure.
BOATING	Motor boating, canoeing, sailing, yachting.
CAMPING	Overnight camping in tents, sleeping bags, or travel trailers in undeveloped areas or in campgrounds.
DRIVING FOR PLEASURE	Leisure or pleasure driving, not involving extended periods of time.
FISHING	Stream, lake, surf or deep-water fishing, but not for profit. Casting for fish for pleasure.
HIKING	Hiking on a trail while carrying packs.
HORSEBACK RIDING	Saddle or bareback horse riding for pleasure, but not for horse racing.
HUNTING	Hunting of fowl or game with any common weapon, but not for profit, Trapping, but not for profit.
ICE SKATING	Ice skating for pleasure.
NATURE WALKS	Group or individual walks usually in rural areas, but sometimes in urban areas, to observe nature and works of nature and to collect specimens. Bird watching.
PICNICKING	Taking food together out of doors, but not as incidental to home dining.
PLAYING OUTDOOR GAMES OR SPORTS	Playing or participating in outdoor games or sports including baseball, basketball, football, tennis, golf, soccer, running, lacrosse, rugby, volley ball.
SIGHTSEEING	Travelling with the objective to observe works of man or nature which are of interest and involving an extended period of time (weekend) away from home.
SLEDDING OR TOBOGGANING	Sledding, tobogganing.
SNOW SKIING	Skiing on snow for pleasure.
SWIMMING (BEACH)	Scuba diving, swimming, lounging at an ocean or lake front beach, including incidental games and activities.
SWIMMING (POOL)	Swimming or lounging at an outdoor pool.
WALKING FOR PLEASURE	Walking on streets, sidewalks or the like in small groups or individually for pleasure, but not hiking.
WATER SKIING	Water skiing for pleasure, surfing.
NOTE: Emphasis on the use of ORRRC categories, or combinations thereof, and the lack of demand data available on such specific activities as snowmobiling, skydiving, etc. precluded the use of these categories. Although not specifically identified, such activities as tennis and golf are included in "Playing Outdoor Games or Sports".	

None of the above sources estimated growth in the winter sports. Because it was felt that snow skiing is increasing in popularity similar to boating, the growth rates for boating as published in the 1965 BOR report were used also for snow skiing. The BOR growth rate for playing outdoor games and sports was used for estimating growth in ice skating, sledding and tobogganing.

- The results of the ORRRC survey have validity to smaller areas like Maryland. Maryland's population, whether classified in age groups or in income ranges, has the same basic recreation habits as those of comparable national groups.
- Of all the socio-economic characteristics correlated to recreation patterns, annual family income and age of population are assumed to be most important in this study. (Data were not readily available from the 1970 census for other identified characteristics — educational attainment, race, occupation, habitat, etc. — when the study was made.)
- Changes in taste or habit, work schedules, and innovative changes in recreation not anticipated by the ORRRC and the BOR forecasts will not occur.
- Changes in the participation rates and the number of occasions on which people participate in activities forecasted by BOR for the Nation as a whole will be applicable in Maryland.
- For census data and ORRRC information, the population within a category is homogeneous.

PARTICIPATION RATES

Maryland shares the urban experiences of states identified by ORRRC as the Northeast Region. Maryland also shares in the rural patterns evident in states designated by ORRRC as the Southern Region. In this study, it is not assumed that Maryland exhibits all the recreation patterns shown in the ORRRC Study for the Northeast Region or all patterns of the Southern Region. Table 5 shows that Maryland's characteristics do not fit exclusively into either the Northeast or the Southern Region. Maryland has an income versus recreation pattern which is similar to the Northeast Region; Maryland resembles the Southern portion with respect to age of population versus recreation patterns.

The 1970 and 1990 annual resident demand occasions by recreation activity by region are shown in Table 6 on the following page.

INTER-COUNTY & INTER-REGIONAL DEMAND

Basic Procedures and Assumptions

This section outlines the method used to calculate recreation demand exerted by State residents on the counties and regions of Maryland.

The following basic assumptions are made:

- Attendance at a particular recreation site decreases as the travel time from place of residence to the site increases, except for sites offering unique physiographic qualities, such as mountains and seashore.
- Automobile and buses are the only modes of transportation from residence to recreation site.
- The attractiveness and suitability of sites for recreational use are independent of location, except that snow skiing is limited to hilly and mountainous terrain and beach swimming, fishing, water skiing, and boating are limited to lake and shore areas.
- There is a maximum desirable travel time for each activity, beyond which a participant will not go. (See Table 7.)
- The attractiveness and suitability of all similar sites within a county or a region are equal, except for sites offering unique locational or physiographic characteristics.

Travel Times

Travel times between county seats are calculated by using the speed rates shown in Table 8. County seats are in most instances, the population or geographic centers of the counties.

The total in-state demand is calculated by using the maximum desirable travel times, the calculated travel times between county seats and the resident demand forecasts.

Table 9 summarizes the in-state demand, taking into account inter-county and inter-region demand. These demand figures indicate by region, the demand (in number of occasions) which will be exerted by all Maryland residents upon each Region.

OUT-OF-STATE DEMAND

Basic Procedures and Assumptions

Records indicate that a considerable portion of attendance at Maryland's State Parks is by out-of-state residents who live near or vacation in Maryland.

Out-of-state demand is the number of occasions of participation of out-of-state residents in Maryland minus the estimated number of occasions on which Maryland residents utilize recreational facilities in other states.

In the summer of 1965, the Maryland Department of Forests and Parks surveyed users of 12 state parks and determined their places of residence. Available county and local sources also were used to calculate current and anticipated out-of-state demands in Maryland.

Table 10 shows the estimated percentages of net out-of-state attendance within each region and the net out-of-state demand expressed as a percentage of in-state demand.

Two assumptions, in addition to those listed earlier, are made with respect to out-of-state demand:

- Out-of-state users seek recreation by activity in the same proportion as in-state users.
- The proportion of out-of-state demand to in-state demand remains constant.

Table II on page 34 shows the 1970 and 1990 annual out-of-state demand by Region and recreation activity.

Table 5
1960 POPULATION COMPARISON OF MARYLAND WITH
ORRRC SAMPLE FOR THE U.S., NORTHEAST REGION & SOUTHERN REGION

Population Characteristics	Maryland (US Census)	U. S. (ORRRC)	Northeast Region (ORRRC)	Southern Region (ORRRC)
PERCENT OF TOTAL FAMILIES				
Annual Family Income				
Less than \$3,000	15%	23%	14%	37%
\$3,000 - \$5,999	31%	38%	46%	36%
\$6,000 - \$9,999	34%	27%	27%	20%
\$10,000 & Over	20%	12%	12%	7%
TOTAL*	100%	100%	100%	100%
Median	\$5,310	\$3,630	\$5,420	\$4,000
PERCENT OF TOTAL POPULATION				
Age				
12 - 24 years	24%	25%	24%	27%
25 - 44 years	39%	35%	36%	35%
45 - 64 years	26%	28%	28%	27%
65 years and over	10%	12%	12%	11%
TOTAL*	100%	100%	100%	100%
Median	38.3 yrs.	39.3 yrs.	39.4 yrs.	38.1 yrs.

* Figures may not total 100 percent because of rounding. In 1960 dollars.

TABLE 6
SUMMARY OF ANNUAL RESIDENT DEMAND OCCASIONS BY REGION AND ACTIVITY — 1970 and 1990 (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Attending Outdoor Concerts,	145.5	279.1	1,535.900	3097.1	926.4	2362.1	57.4	119.5	69.0	136.8	58.5	110.9
Attending Outdoor Sports Events	207.8	1089.8	8670.4	13564.6	4913.4	9893.1	462.5	775.0	523.5	831.9	509.6	419.2
Bicycling	306.9	413.0	2081.8	2990.9	1187.9	2150.5	109.1	164.8	128.1	181.4	122.7	164.8
Boating	698.9	1287.1	5681.5	10731.9	3189.0	7877.8	256.9	522.0	308.99	603.1	309.2	369.8
Camping	288.6	665.5	2220.7	4499.4	1383.1	3609.5	127.0	276.6	146.4	289.3	136.0	263.6
Driving for Pleasure	5232.5	7925.0	37862.700	56866.0	10006.9	40744.9	1969.6	3338.7	2363.9	3781.3	2305.4	3181.0
Fishing	1004.1	1312.9	5892.0	8014.4	3537.8	6232.0	425.6	527.5	522.0	611.3	509.1	361.6
Hiking	141.0	263.8	1042.5	2100.5	808.6	2017.7	57.5	119.3	63.9	130.2	65.1	120.8
Horseback Riding	417.7	661.6	3058.0	5199.9	1790.8	3759.8	175.8	307.0	188.6	314.2	167.6	316.6
Hunting	469.5	623.0	2423.6	3182.9	2235.4	3836.5	199.4	289.2	235.4	319.1	220.7	382.5
Ice Skating	122.3	200.2	958.0	1655.4	592.9	1305.8	45.5	88.0	54.2	93.8	53.2	87.1
Nature Walks	726.1	1133.8	6213.7	10121.9	3627.9	7558.8	272.3	485.6	333.4	616.3	298.2	162.6
Picnicking	2089.7	3173.4	17857.9	28289.6	10355.2	21105.7	794.1	1354.4	956.4	1243.3	904.0	1367.2
Playing Outdoor Sports	5439.6	6946.8	51415.9	79552.0	31314.0	61044.7	1877.7	3107.7	2472.5	3821.0	2167.0	3137.1
Sightseeing	1645.9	2717.2	14234.8	24457.7	8562.9	18880.5	561.6	1033.8	701.5	1219.5	478.3	1110.4
Sledding & Tobogganing	378.5	636.1	4556.9	7896.3	2762.4	6077.1	120.0	235.6	142.6	249.9	125.2	303.9
Snow Skiing	45.5	76.0	352.3	864.2	308.3	660.9	15.5	31.2	17.7	30.6	17.3	28.4
Swimming Beach	2056.4	3760.7	17766.2	33915.4	11017.3	26968.0	754.2	1498.3	886.3	1806.8	882.0	1605.3
Swimming Pool	8243.0	13397.2	68946.6	117222.4	40506.4	88249.3	2824.1	5198.2	3546.8	6099.8	3546.1	6756.6
Walking for Pleasure	199.1	449.8	1156.0	2805.0	841.2	2563.7	65.9	167.8	78.0	184.7	72.2	163.1
Water Skiing												
TOTALS	30858.6	48732.0	253913.4	417038.5	149867.8	316898.4	11171.7	19641.2	13739.1	22764.3	13047.4	20537.5

* Figures are rounded to the nearest hundreds.

Note: Resident Demand is the demand expressed in a given county or region by the residents of that particular county or region.

Table 7 MAXIMUM DESIRABLE TRAVEL TIME BY ACTIVITY*	
Activity	Maximum Travel Time (in minutes)
Attending Outdoor Concerts, Dramas	60
Attending Outdoor Sports Events	60
Bicycling	30
Boating	90
Camping	240
Driving for Pleasure	60
Fishing	120
Hiking	60
Horseback Riding	60
Hunting	120
Ice Skating	60
Nature Walks	30
Picnicking	60
Playing Outdoor Sports	30
Sightseeing	240
Sledding & Tobogganing	30
Snow Skiing	120
Swimming Beach	120
Swimming Pool	30
Walking for Pleasure	30
Water Skiing	120

* The times, estimated by Urban Research & Development Corporation, reflect the maximum desirable times a person should be expected to travel, given an adequate level of recreation opportunities in an area. The figures do not represent the maximum time a person will travel to participate in an activity. Five minutes were added to each driving time to allow for traffic lights, stop signs and interchanges. An official highway map of Maryland was used to calculate mileage.

Table 8 ASSUMED TRAVEL SPEED BY HIGHWAY TYPE TO CALCULATE DRIVING TIMES		
HIGHWAY TYPE	TRAVEL SPEED IN MILES PER HOUR	
	IN A CITY	ELSEWHERE
Interstate	50	60
4 - 6 lane, controlled access	40	60
Other 4 - 6 lane	30	50
2-lane	20	40

Where more than one fairly direct route is possible between two county seats, the shortest travel time is used.



TABLE 9 SUMMARY OF ANNUAL IN-STATE DEMAND OCCASIONS BY REGION AND ACTIVITY — 1970 and 1990 (in thousands)*												
Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Attending Outdoor Concerts	88.9	195.2	1654.1	3615.0	927.3	2027.1	36.6	80.2	45.3	97.6	41.8	92.4
Attending Outdoor Sports	276.4	470.4	11466.0	19224.7	3698.5	6271.0	441.0	746.8	276.4	470.4	261.7	441.0
Bicycling	306.0	413.6	1081.7	1989.7	1187.1	2149.0	107.6	164.8	127.8	181.6	121.1	164.8
Boating	103.7	216.5	4229.2	8785.8	2444.7	4076.8	1326.1	2755.8	1107.8	2299.2	1233.3	2559.3
Camping	1902.3	4245.3	378.4	846.2	663.4	1457.8	515.6	1151.8	205.8	461.5	736.0	1642.2
Driving for Pleasure	3694.7	6156.6	19247.6	32056.1	24688.7	41114.8	8438.7	14052.3	6905.1	11498.6	6765.6	11267.5
Fishing	2103.9	3055.8	1866.8	2709.5	2615.0	3796.6	1724.2	2502.1	1783.5	2589.1	1794.6	2605.8
Hiking	362.1	775.0	506.5	1082.1	657.0	1012.9	309.2	663.1	351.9	750.5	179.0	382.4
Horseback Riding	672.4	1218.0	1740.4	3152.3	1810.2	3276.5	793.9	1437.8	540.5	977.5	243.1	442.2
Hunting	2064.2	3045.8	393.8	580.1	133.9	195.9	1024.3	1511.3	1185.3	1749.9	983.6	1451.1
Ice Skating	284.6	535.5	614.0	1155.7	513.1	967.0	127.5	239.7	185.6	349.9	96.9	181.6
Nature Walks	726.8	1133.0	6212.9	10120.8	3628.9	7558.8	271.6	484.5	332.8	616.6	298.5	452.5
Picnicking	3164.4	5455.6	9590.3	16538.9	10053.6	17333.9	2956.3	6820.3	3195.7	5511.9	2998.5	4170.8
Playing Outdoor Sports	5439.0	7947.1	51416.9	79552.1	31313.4	61045.8	1877.0	3106.6	2472.3	3822.3	2166.5	3135.9
Sightseeing	2509.0	4698.6	7708.4	14438.3	4989.9	9346.2	3009.8	5636.3	4013.9	7516.8	4172.3	7813.2
Sledding & Tobogganing	378.8	636.2	4556.7	7896.1	2762.8	6077.5	120.3	236.0	142.7	249.5	124.8	203.4
Snow Skiing	600.8	1361.3	122.6	277.9	225.0	507.4	15.8	31.5	1.1	2.3	0	0
Swimming Beach	104.0	215.7	3886.7	8090.5	2470.4	5142.4	3195.9	6652.4	256.8	5358.2	5043.6	1050.6
Swimming Pool	989.8	1810.1	9198.6	17560.0	5303.7	12983.6	363.0	716.4	426.3	821.5	423.9	772.5
Walking for Pleasure	8242.7	13399.1	68845.7	117222.4	40506.2	88250.0	2825.8	5197.3	3548.0	6098.3	3544.3	5755.8
Water Skiing	60.6	158.8	714.7	1875.0	258.4	678.4	586.9	1539.8	258.4	664.9	539.7	1418.7
TOTALS	34075.1	57143.2	206432.0	349769.2	140851.2	276269.4	31067.1	55726.8	27357.6	52088.0	31758.8	56463.9

* Figures are rounded to the nearest hundred.

Note: In-State Demand is the demand exerted upon a given county or region by Maryland residents regardless of the participants' place of residence.

Table 10
PERCENT OUT-OF-STATE DEMAND SUMMARY BY REGION

Region	Out-of-state average % of total atten- dance ¹	% of Maryland residents going out-of- state ²	Net out-of- state demand as % of total demand	Out-of-State demand as % of in-state demand
Western Maryland	48	15	33	50
Baltimore	20	7	13	15
Suburban Washington	NA ³	--	17 ³	20
Southern Maryland	20	7	13	15
Upper Eastern Shore	31	5	26	35
Lower Eastern Shore	32	6	26	35

1 This represents the average of the percentages of out-of-state attendance compared to total attendance at each surveyed state park in each region. The figures are based on a 1965 state park attendance survey and estimates by Urban Research & Development Corporation.

2 Urban Research & Development Corporation estimates.

3 The 1965 State survey did not include parks in the Suburban Washington Region. The Suburban Washington estimate of net out-of-state demand is based on comparable figures of 18.6 percent, 15.3 percent and 5.5 percent for three regional parks (Cabin John, Wheaton and Clinton respectively) in the Suburban Washington Region.

SUMMARY OF TOTAL DEMAND (IN-STATE, OUT-OF-STATE)

The results of the in-state and out-of-state demand forecasts are totalled to produce Tables 12 & 13, which summarize total annual and peak season demand forecasts by region and activity for 1970 and 1990 respectively.



TABLE 11 SUMMARY OF ANNUAL OUT-OF-STATE DEMAND BY REGION AND ACTIVITY — 1970 and 1990 ¹ (in thousands)*												
Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Attending Outdoor Concerts	45.3	97.6	247.5	542.1	184.8	406.1	5.2	12.1	15.7	34.9	13.9	31.4
Attending Outdoor Sports	138.2	235.2	1699.3	2884.1	740.9	1255.4	64.7	111.7	97.0	164.6	91.1	155.8
Bicycling												
Boating	52.8	109.1	634.8	1317.0	489.3	985.9	198.3	412.9	387.4	804.0	431.1	896.8
Camping	950.1	2122.7	56.1	126.8	312.3	551.6	76.9	172.6	72.8	162.2	257.8	573.8
Driving for Pleasure	1849.2	3078.3	2887.5	4810.1	4938.5	8222.2	1264.8	2109.7	2417.9	4024.9	2366.5	3944.2
Fishing	1051.9	1527.9	279.7	405.6	522.3	759.3	259.3	376.0	624.1	905.6	627.8	913.0
Hiking	181.0	386.5	75.3	162.7	93.6	203.4	46.8	100.0	122.0	262.4	63.1	134.2
Horseback Riding	336.2	610.3	261.2	473.2	362.0	654.3	199.0	214.6	188.8	352.4	85.3	155.2
Hunting	1032.1	1522.9	58.2	87.3	27.2	38.8	153.3	227.0	415.2	613.0	343.4	508.3
Ice Skating	141.8	267.2	91.8	173.4	103.0	193.8	19.4	35.7	64.3	122.4	33.7	63.2
Nature Walks												
Picnicking	1580.7	2729.4	1439.8	2482.1	2009.5	3455.5	594.7	1023.5	1117.4	1928.1	1048.6	1809.1
Playing Outdoor Sports												
Sightseeing	1254.5	2348.0	1157.4	2166.6	999.0	1870.3	452.2	845.7	1405.3	2361.7	1458.9	2733.9
Sledding & Tobogganing												
Snow Skiing	300.4	680.6	18.0	41.6	45.0	101.3				1.1		
Swimming Beach	51.4	107.9	582.9	1213.3	494.3	1028.5	478.9	997.7	89.9	1875.9	1765.5	3674.8
Swimming Pool												
Walking for Pleasure												
Water Skiing	29.6	79.4	107.7	281.3	25.6	135.9	87.5	228.8	887.0	232.9	189.8	496.7
TOTALS	8995.2	15903.0	9597.2	17167.2	11147.3	19562.3	3822.0	6868.1	7905.8	13835.1	8776.5	16090.4

* Figures are rounded to the nearest hundreds.

1 The total number of occasions of participation of out-of-state residents in Maryland within each region.

TABLE 12 SUMMARY OF TOTAL IN-STATE AND OUT-OF-STATE ANNUAL & PEAK SEASON DEMAND OCCASIONS BY REGION AND ACTIVITY FOR 1970 (in thousands)*												
Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Attending Outdoor Concerts	134.2	77.0	1901.6	1090.0	1112.0	638.0	41.9	24.0	61.0	35.0	55.8	32.0
Attending Outdoor Sports	414.5	141.0	13165.3	4478.0	4439.4	1510.0	505.7	172.0	373.4	127.0	352.8	120.0
Bicycling	306.0	91.0	2081.7	619.0	1187.1	353.0	107.6	32.0	127.8	38.0	121.1	36.0
Boating	156.4	86.0	4864.0	2674.0	2934.0	1613.0	1524.3	838.0	1495.2	822.0	1664.4	915.0
Camping	2852.4	1372.0	434.5	209.0	975.7	625.0	592.5	285.0	278.6	134.0	993.8	478.0
Driving for Pleasure	5543.9	1511.0	22135.1	6033.0	29627.2	8075.0	9704.5	2645.0	9322.9	2541.0	9132.1	1489.0
Fishing	3155.8	1704.0	2146.5	1159.0	3137.3	1694.0	1983.5	1071.0	2407.6	1300.0	2422.4	1308.0
Hiking	543.1	267.0	581.7	286.0	750.5	369.0	356.0	175.0	473.9	233.0	242.0	119.0
Horseback Riding	1008.5	390.0	2001.6	774.0	2172.2	840.0	912.9	353.0	729.3	282.0	328.4	237.0
Hunting	3096.2	1596.0	452.0	233.0	161.0	183.0	1177.6	607.0	1600.5	825.0	1327.0	684.0
Ice Skating	426.4	418.0	705.8	692.0	616.1	604.0	146.9	144.0	250.9	246.0	130.6	128.0
Nature Walks	726.8	297.0	6212.9	2539.0	3628.9	1483.0	271.6	111.0	332.8	136.0	298.5	122.0
Picnicking	4745.1	1516.0	11030.1	3524.0	12063.0	3854.0	4551.0	1454.0	4313.1	1378.0	4047.1	1293.0
Playing Outdoor Sports	5439.0	1672.0	51416.9	15806.0	31313.4	9626.0	1877.0	577.0	2472.3	760.0	2166.5	666.0
Sightseeing	3763.5	1473.0	8865.9	3470.0	5988.9	2344.0	3462.0	1355.0	5419.2	2121.0	5631.2	2204.0
Sledding & Tobogganing	378.8	337.0	4556.7	3995.0	2762.8	2458.0	120.3	107.0	142.7	127.0	125.8	211.0
Snow Skiing	901.1	801.0	140.6	125.0	270.0	240.0	15.8	0	1.1	1.0	0	0
Swimming Beach	155.4	121.0	4469.6	3481.0	2964.8	2309.0	3674.8	2862.0	346.7	2700.0	6809.1	5303.0
Swimming Pool	989.8	829.0	9198.6	7164.0	5303.7	4442.0	363.0	304.0	426.3	357.0	523.9	355.0
Walking for Pleasure	8242.7	2214.0	68845.7	18492.0	40506.2	10880.0	2825.8	759.0	3548.0	953.0	3544.3	952.0
Water Skiing	90.2	67.0	822.4	611.0	284.0	211.0	674.3	501.0	1140.1	245.0	729.5	542.0
TOTAL	43069.8	16980.0	216029.2	77455.0	151898.2	53951.0	34889.0	14376.0	35263.4	15370.0	40545.3	17984.0

*Figures are rounded to the nearest hundreds.

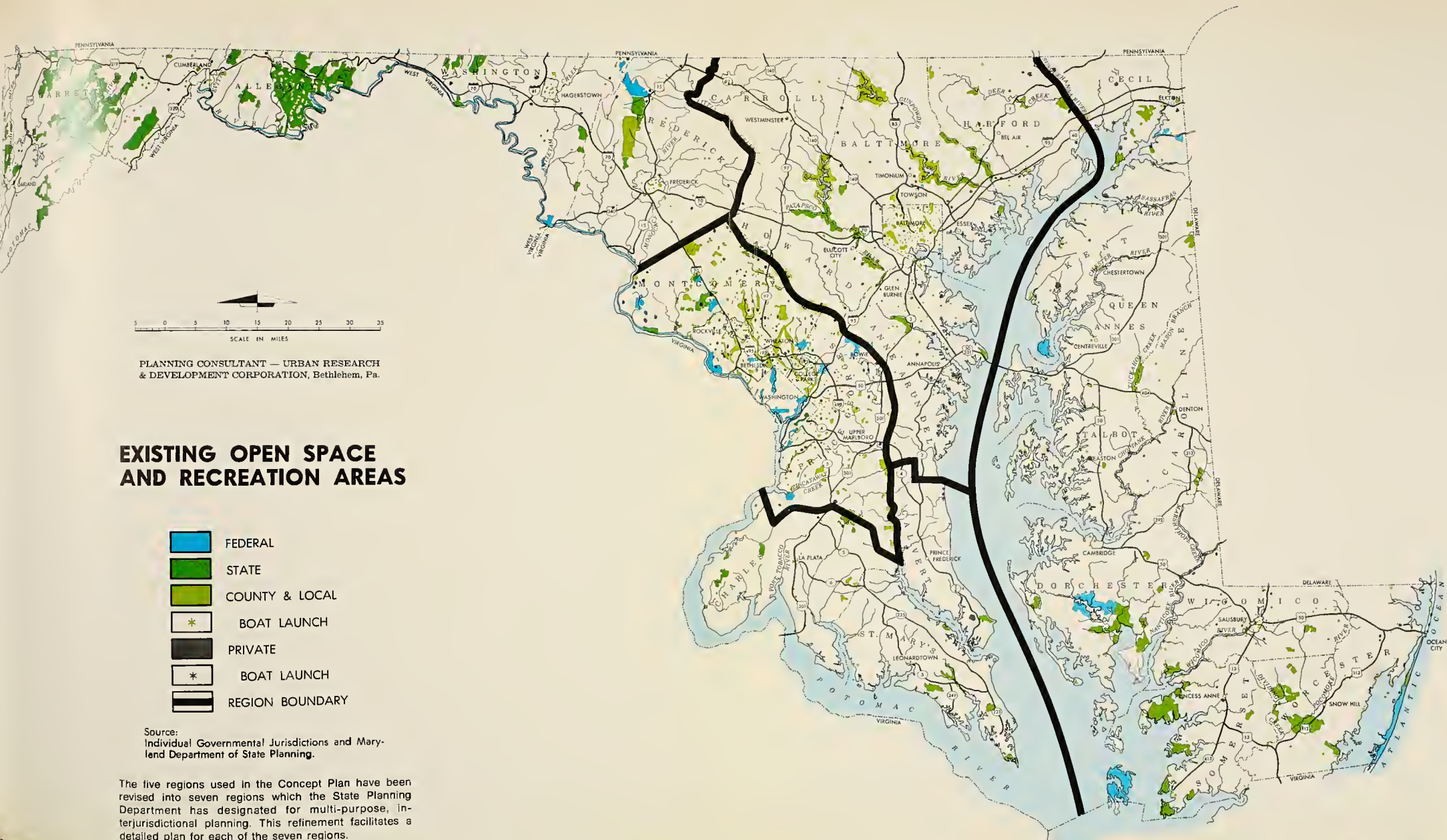


TABLE 2 PUBLIC OWNERSHIP OF OUTDOOR RECREATION & OPEN SPACE AREAS BY COUNTY AND PLANNING REGIONS, 1971					
Region and County	Ownership			Total Acres	
	Federal	State	Local		
Western Maryland & Frederick Regions	10,339	135,965	8,791		155,095
Allegany	1,188	42,501	114	43,803	
Garrett	0	78,746	5	78,751	
Frederick	5,769	9,468	8,351	23,588	
Washington	3,382	5,250	321	8,953	
Suburban Washington Region	6,421	7,795	9,797		24,013
Prince Georges	5,769	4,057	2,346	12,172	
Montgomery	652	3,738	7,451	11,841	
Baltimore Region	17,826	17,692	15,896		51,414
Baltimore City	86	0	5,844	5,930	
Baltimore County	45	9,262	6,422	15,729	
Anne Arundel	1,695	1,163	1,805	4,663	
Harford	16,000	1,367	681	18,048	
Howard	0	4,733	921	5,654	
Carroll	0	1,167	223	1,390	
Southern Maryland Region	10	7,159	960		8,129
Calvert	0	313	518	831	
Charles	10	6,158	11	6,179	
St. Mary's	0	688	431	1,119	
Upper Eastern Shore Region	3,653	7,948	630		12,231
Cecil	1,369	4,332	282	5,983	
Kent	2,284	1,367	128	3,779	
Caroline	0	1,920	150	2,070	
Talbot	0	159	27	186	
Queen Anne's	0	170	43	213	
Lower Eastern Shore Region	23,929	48,989	444		73,362
Worcester	8,400	14,261	66	22,727	
Dorchester	11,216	13,058	32	24,306	
Wicomico	0	3,238	304	3,542	
Somerset	4,313	18,432	42	22,787	
TOTAL STATE				324,244	acres

Source: Maryland Department of State Planning, Recreation Inventory, 1970-71.

Note: Leased land, reservoir lands, inappropriate military reservation and game and inland fish lands are excluded from figures.

Private recreation acreages according to inventory are recorded in the Private Sector, Chapter 7.

*Leased land, reservoir lands, military reservations and game and inland fishlands are excluded from figures.

TABLE 3 PUBLIC OUTDOOR RECREATION & OPEN SPACE ACREAGE BY USE CATEGORIES* BY COUNTY AND PLANNING REGIONS, 1970-71												
Use Category	Neighborhood	Community	Metro-Regional	City-Wide	Urban Open Space	General Outdoor	Natural Environ.	Outstand Natural	Wilderness Primitive	Historic Cultural	Unclassified	Total
Western Maryland & Frederick Regions												
Allegany	90	24	0	96	52	387	41,516	20	0	0	1,618	43,803
Garrett	0	5	0	80	30	1,035	75,077	40	2,100	348		78,751
Frederick	47	124	8,020	53	0	6,599	8,707	30	0	8		23,588
Washington	25	115	0	63	0	526	5,075	0	0	21	3,128	8,953
												155,095
Suburban Washington Region*												
Prince Georges	0	1,220	719	158	0	9,443	37	0	0	0	595	12,172
Montgomery	928	495	2,115	239	3,913	296	1,789	0	0	166	900	11,841
												24,013
Baltimore Region												
Baltimore City	403	806	3,109	427	94	80	0	4	0	0	1,007	5,930
Baltimore County	1,134	692	494	0	46	208	9,156	0	0	0	3,999	15,729
Anne Arundel	265	852	498	48	0	74	753	0	29	10	2,134	4,663
Harford	0	29	0	150	0	545	1,321	0	16,000	3		18,048
Howard	20	0	0	0	901	106	0	0	0	0	4,627	5,654
Carroll	0	79	0	0	0	162	0	0	0	0	1,149	1,390
												51,414
Southern Maryland Region												
Calvert	0	0	230	0	0	288	313	0	0	0		831
Charles	0	0	0	0	0	1,771	3,204	0	0	10	1,194	6,179
St. Mary's	244	94	0	0	0	209	572	0	0	0		1,119
												8,129
Upper Eastern Shore												
Cecil	7	150	0	0	126	801	4,237	0	0	0	662	5,983
Kent	38	7	71	0	0	15	3,134	0	0	0	514	3,779
Caroline	0	0	0	0	0	30	2,028	12	0	0		2,070
Talbot	0	0	0	0	0	0	185	0	0	1		186
Queen Anne's	6	170	10	1	0	26	0	0	0	0		213
												12,231
Lower Eastern Shore												
Worcester	0	35	0	0	0	164	20,276	100	394	1	1,758	22,727
Dorchester	0	32	0	0	0	0	24,274	0	0	0		24,306
Wicomico	58	86	105	72	0	4	3,023	0	0	0	194	3,542
Somerset	0	0	0	42	0	142	15,749	0	6,896	0		22,787
												73,362
GRAND TOTAL — STATE OF MARYLAND											324,244	

Source: Maryland Department of State Planning, State Recreation Inventory, 1970-71.

TABLE 13

SUMMARY OF TOTAL IN-STATE AND OUT-OF-STATE ANNUAL & PEAK SEASON DEMAND OCCASIONS BY REGION AND ACTIVITY FOR 1990 (in thousands)*

Activities	Western Maryland/ Frederick County		Baltimore		Sub. Washington		South. Maryland		U. Eastern Shore		L. Eastern Shore	
	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak	Annual	Peak
Attending Outdoor Concerts	292.8	168.0	4157.1	2385.0	2433.2	1396.0	92.4	53.0	132.5	76.0	123.8	71.0
Attending Outdoor Sports	705.6	240.0	22108.8	7520.0	7526.4	2560.0	858.5	292.0	635.0	216.0	596.8	203.0
Bicycling	413.6	123.0	2989.7	889.0	2149.0	639.0	164.8	49.0	181.6	54.0	164.8	49.0
Boating	325.6	179.0	10102.7	554.0	6062.7	3333.0	3168.7	1742.0	3103.2	1706.0	4566.1	1900.0
Camping	6368.0	3063.0	973.0	468.0	1909.4	1226.0	1324.3	637.0	623.7	300.0	2216.2	1066.0
Driving for Pleasure	9234.9	2517.0	36866.1	10048.0	49337.0	13447.0	16161.9	4405.0	15523.5	4231.0	15211.7	4146.0
Fishing	4583.7	2475.0	3115.1	1682.0	4555.9	2460.0	2878.0	1554.0	3494.7	1887.0	3518.8	1900.0
Hiking	1161.4	571.0	1244.8	612.0	1216.3	598.0	762.8	375.0	1012.9	498.0	516.6	254.0
Horseback Riding	1828.3	707.0	3625.6	1402.0	3930.7	1520.0	1652.5	639.0	1318.9	510.0	597.4	231.0
Hunting	4568.7	2355.0	667.4	344.0	234.7	221.0	1738.2	896.0	2362.9	1218.0	1959.4	1010.0
Ice Skating	802.7	787.0	1329.1	1303.0	1160.8	1138.0	275.4	270.0	472.3	463.0	244.8	240.0
Nature Walks	1133.0	463.0	10120.8	4136.0	7558.8	3089.0	484.5	198.0	616.6	252.0	462.5	189.0
Picnicking	8185.0	2615.0	19021.0	6077.0	20789.5	6641.0	7843.8	2506.0	7440.0	2377.0	6979.9	2230.0
Playing Outdoor Sports	7947.1	2443.0	79552.1	24455.0	61045.8	18766.0	3106.6	955.0	3822.3	1175.0	3135.9	964.0
Sightseeing	7046.7	2758.0	16604.9	6499.0	11216.5	4390.0	6481.0	2537.0	9878.5	3972.0	10547.0	4128.0
Sledding & Tobogganing	636.2	566.0	7896.1	7560.0	6077.5	5407.0	236.0	210.0	249.5	222.0	203.4	181.0
Snow Skiing	2041.9	1815.0	319.5	284.0	608.6	542.0	31.5		3.4	3.0		
Swimming Beach	323.6	252.0	9303.9	7246.0	6170.9	4806.0	7650.1	5958.0	7234.1	5634.0	14175.4	11040.0
Swimming Pool	1810.1	1510.0	17560.0	13676.0	12983.6	10874.0	716.4	600.0	821.5	688.0	772.5	647.0
Walking for Pleasure	13399.1	3599.0	117222.4	31486.0	88250.0	23704.0	5197.3	1396.0	6098.3	1638.0	5755.8	1546.0
Water Skiing	238.2	177.0	2156.3	1602.0	814.3	605.0	1768.6	1314.0	897.8	667.0	1915.4	1523.0
TOTALS	73046.2	29383.0	366936.4	135228.0	295631.6	106762.0	62594.3	26586.0	64923.2	27787.0	72554.2	33418.0

* Figures are rounded to the nearest hundreds.

INTERSTATE RECREATION

Maryland residents travel to recreational facilities in adjacent states, particularly those within 60 to 75 miles of Maryland's major urban centers, just as people from other states come here for recreation. Planning for future open space and outdoor recreation areas must, therefore, be coordinated with adjacent states. Maryland recognizes that each state cannot be recreationally self-sufficient.

Adjacent states were contacted and copies of their outdoor recreation plans were obtained. The accompanying map shows the locations and types of existing and planned parks in adjacent states that have or will have dramatic influence on Maryland; they are considered in preparing open space and recreation policies for Maryland.

DELAWARE

Delaware's ten state parks have varying degrees of attraction for Maryland residents. The ecological value of woodlands and wetlands is considered the most compelling reason for preserving these areas.

Many Marylanders are attracted to the Delaware seashore and Cape Henlopen State Park, largely because Maryland's seashore is limited. This beautiful sandy beach continues south to Assateague Island, Virginia, and becomes a haven between late Spring and early Fall. The Delaware Plan indicates plans for expanding the Cape Henlopen State Park from 1,641 acres to 3,641 acres and for developing a minimum of 20 self-contained bay and ocean-oriented bathing centers, with fishing and boating activities along the bay front.

The Trap Pond State Park, although it is the most remote from Delaware's major urban centers, is the most highly developed park in the entire State system. Existing and proposed development emphasizes group use and extended-stay use. Plans call for expanding the park from its 965 acres to 2,520 acres. Trap Pond is only three miles

from the Maryland State line and is very popular among Maryland residents.

The demand for seashore park facilities is doubling about once every two or three years.

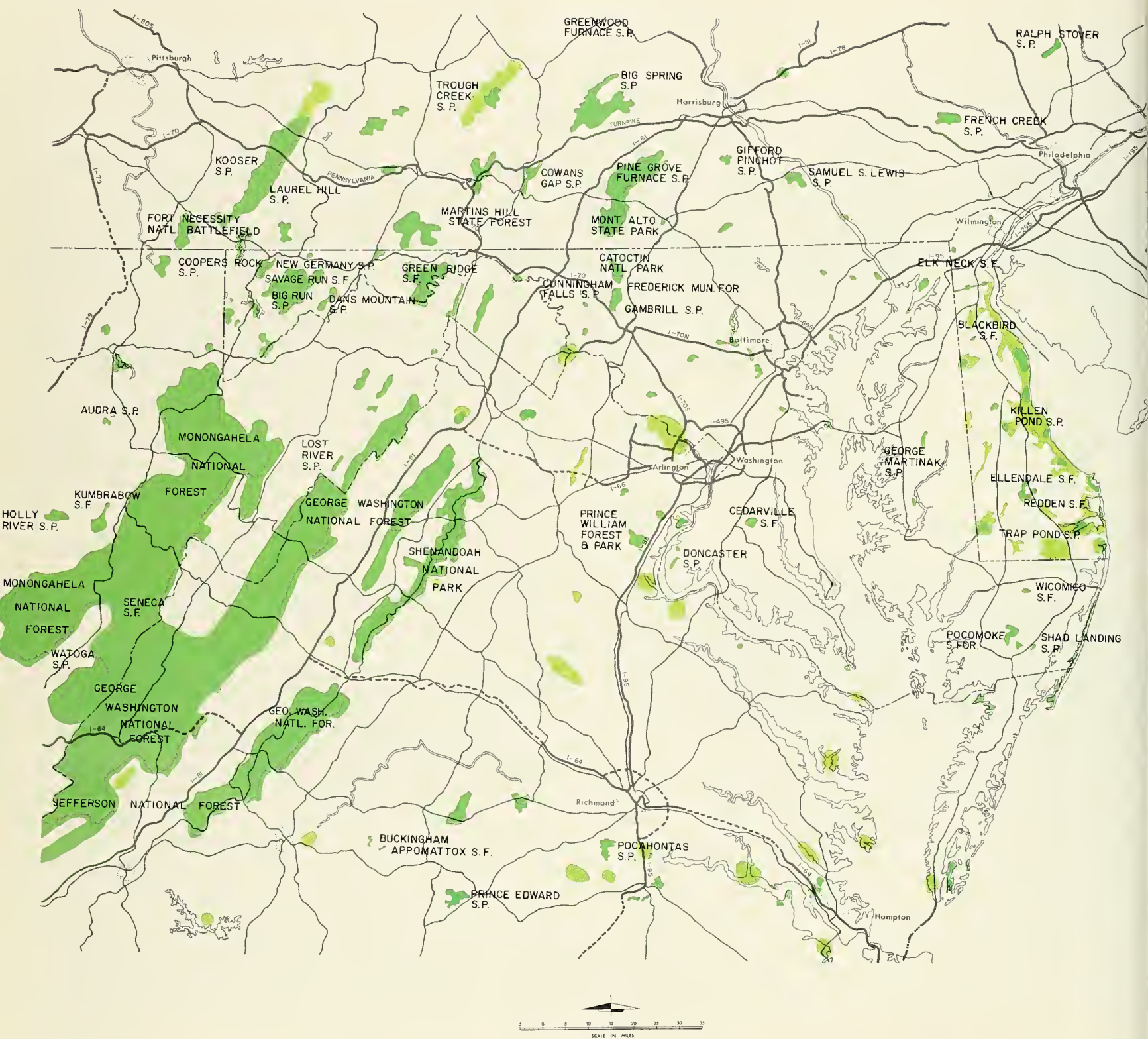
PENNSYLVANIA

Pennsylvania, the largest of the adjacent states, has an extensive park system. Twenty-three of Pennsylvania's 76 state parks are located within 60 miles of the Maryland State Line.

A 1967 State Park Survey sponsored by the Pennsylvania Department of Forests and Parks shows that the most significant use by Maryland residents is in the four major parks that form an arc north of the Baltimore Region — S. S. Lewis, Gifford Pinchot, Pine Grove Furnace and Caledonia. The added attraction of the popular Gettysburg National Military Park makes this area of Pennsylvania the most popular for Marylanders. The relatively new 3,300 acre Codorus State Park, not surveyed in 1967, has a 1,275 acre lake, making this portion of Pennsylvania even more attractive, particularly for residents in the Baltimore Region. All of these parks are within approximately 70 miles from downtown Baltimore.

Although not as close to Maryland's major population centers, there are additional recreation areas in Pennsylvania that will undoubtedly become more popular to Marylanders, particularly from Western Maryland. For some day-use and considerable extended-stay use, Ohiopyle, directly north of the Maryland-Virginia boundary, and the enormous Raystown Dam and reservoir complex northwest of Hagerstown are attractive to Marylanders. The Youghiogheny River Reservoir, which had one million visitors in 1965, is in the general area

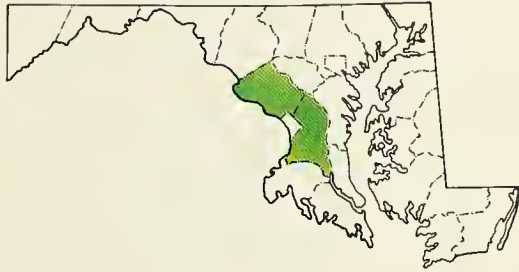
INTERSTATE RECREATION



Source:
Individual State Outdoor Recreation and Open
Space Reports

BALTIMORE REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
132 Timber Grove Area Park	Gunpowder Falls watershed area	Golf, limited picnicking	C	Acquire and develop	AC	
133 Tracy's Creek Stream Valley	Natural stream valley	Hiking, fishing, nature study	C	Conservation zoning	CA	
134 Tridelphia Recreation Area	Tridelphia reservoir	Limited recreation including fishing, picnicking, hiking	C	Provide limited recreation facilities	LU	
135 Truxton Park	Anapolis Peninsula	Intensive Recreation uses	C	Acquire and develop	AC	
136 West Branch Stream Valley Area	Natural stream valley	Fishing, hiking, nature study	C	Conservation zoning	CA	
137 Western Area Park	Patapsco River	Golf and general recreation	C	Acquire and develop	AC	
138 Western Run Stream Valley	Stream valley	Hiking, fishing, nature study, picnicking	C	Conservation zoning, acquire through other than fee simple	LU	*
139 Western Run Watershed Area	Water resources	Hiking, limited picnicking, nature study	C	Conservation zoning, acquisition through other than fee simple.	CA	
140 Whitehall & Nearby Broadneck Recreation Area	Historic & Broadneck Peninsula	Scenic overlook & general recreation & Golf	C	Recommended National Historic Landmark. Preserve through acquisition of development rights or fee simple. Acquire & develop recreation area	AC, LU	
141 Windlass Run Area Park	Bird River	Picnicking, hiking, limited sports, fishing	C	Acquire and develop	AC	*
142 Winters Run	Natural stream valley	Fishing, hiking, nature study	C	Acquire through fee simple and other techniques	LU	*
143 Winters Run - Wet Stone Branch Areas	Natural stream valley	Water oriented recreation activities, hiking, picnicking	C	Acquire through fee simple & other techniques	LU, CA	
144 Worthington, Green Spring & Caves Valley	Unique natural area, agricultural, scenic	Houses - large lot zoning, hiking	C, P	Scenic roads, implement Plan for the Valleys	AC, LU, CA	*



SUBURBAN WASHINGTON REGION

REGIONAL ORIENTATION

Montgomery and Prince Georges Counties make up the Suburban Washington Region. It is the fastest growing region in the State; 50 percent of Maryland's growth from 1960 to 1970 occurred there. Suburban Washington contains nearly 1.2 million people and is the most densely developed region in Maryland. The greatest concentration of recreation demand exists in the Suburban Washington Region.

Continued growth makes the preservation of open space, the provision of additional recreation areas, and the protection of water quality very important to this Region. Compounding the Region's increasing recreation needs are the demands being placed on the Suburban Washington facilities by the residents of Washington, D. C., especially on the large, well-developed regional parks such as Cabin John, Wheaton Regional and Cosca Regional. Although not an official part of the Suburban Washington Region, densely populated Washington, D. C., has a relatively large low-income population which will continue to exert a considerable demand influence on major parks surrounding the City. Since this is true in both Maryland and Virginia, a cooperative effort must be made by Federal, State, County, and local governments to provide additional recreation facilities convenient to the Metropolitan Area's urban population.

Efforts must be continued to bring parks to the people by emphasizing additional funding for the expansion of existing parks and the development of new parks, both within and outside the City. Rock Creek and a few other small Piedmont stream valleys provide Washington, D. C., with outstanding natural parks, but the major existing and proposed Activity Centers and Limited Recreation Use Areas outside the City provide the greatest opportunities to enjoy nature, an experience that must be provided to the residents of Washington, D. C. Since outlying areas will be inaccessible because of location, income, transportation, etc., to many City residents, the people should be provided every opportunity to enjoy the benefits of recreation in a natural setting in the surrounding counties. Programs of interchange should be encouraged.

The Region's unique natural stream valley system and existing and proposed regional parks within and adjacent to these and other significant natural features provide outstanding opportunities for meeting the greatest recreation demands which are walking, playing sports, swimming, picnicking and sledding. The Region has used this natural feature framework to develop what is considered by many to be the finest stream valley park system in the country. The Region also has many local playgrounds and large regional parks. The open space and outdoor recreation system in the Suburban Washington Region is not only of high quality, it is extensive. Approximately 45,000 acres of publicly owned open space exist in the Region today, approximately

27,000 acres of which have been acquired by the Maryland National Capital Park and Planning Commission. Despite this extensive park system, most parks are often crowded.

The popularity of driving for pleasure and sightseeing, which rank among the seven most popular recreation activities in the Region, can be well served by the Region's historic features and by designated scenic roads that meander through the attractive region. A scenic roads and trail system that uses the Region's network of stream valleys without destroying natural amenities is recommended. Rest stops and scenic overlooks should be strategically located.

Particular emphasis must be given to areas within the Region to provide additional open space and recreation opportunities. The Potomac and Patuxent, which frame the Region on the west and east, provide outstanding potential. It is recommended that the Federal government continue in its efforts in preserving and maintaining the C & O Canal as a national historic park, beginning at the District of Columbia. The designation of the Potomac River as a National River is also recommended for the preservation of scenic and historic values and as a national area for outdoor recreation, which would include both banks of the River, the islands between, the C & O Canal, and adjacent lands and additional lands where recreation or other public use values are high. The Potomac National River is conceived as a cooperative program of combined federal, state and local action to protect and acquire the needed lands to administer them.

The Patuxent, which should be preserved to serve as a buffer between the Baltimore and Suburban Washington Regions, is an officially-designated State Scenic River; it must be protected in accordance with plans that will be prepared for the Maryland Scenic Rivers Program. Much of the land along the River in Montgomery County is in public open space, which is not the case in Prince Georges. The State and County must make a concerted effort to acquire land along the Patuxent through outright acquisition and through other measures, to ensure its protection. Activity Centers at strategic locations along the River can provide water-oriented recreation facilities that are in such great demand in the Region.

Additional emphasis should be given to more intensive development of existing State Parks in the Region, to the development of new State Parks such as the Seneca in Montgomery County, and to joint State/County participation in open space on large Regional Parks that are proposed to ring the Beltway.

Areas within large Federal land holdings, such as the Beltsville Agricultural Research Center, should be considered for public recreation. Lands could be developed and maintained by the National Park Service. Land transfers to the State or County for recreation development provide an additional opportunity for utilizing these existing publicly-owned lands. The National Park Service is urged to provide additional facilities within their existing parks to meet the great demands for picnicking, camping, nature study and other activities that will retain the natural character of the park.

Local emphasis should continue to be directed toward future stream valley park acquisition and development, toward more urban-oriented parks in the highly developed areas of the region, and toward the development of regional parks and school/park recreation complexes.

The demand for outdoor recreation in the Suburban Washington Region must be met by utilizing both private and public lands. Active sports can be enjoyed in the Region's many local parks and playgrounds, but other popular recreation activities such as fishing, boating, camping, hiking, swimming, and horseback riding require more land. These and other activities can be provided by private enterprise in the Region's rural areas to help meet a substantial part of the growing need. Developers should be encouraged to utilize cluster subdivisions and planned unit development to assist the Region in setting aside open space lands and in providing small neighborhood parks.

Table 20

PEAK SEASON AND ANNUAL DEMAND RANKED BY ACTIVITY—1970, 1990
Suburban Washington Region

Rank	Activity	1970 (millions of occasions)		1990 (millions of occasions)	
		Peak Season	Annual	Peak Season	Annual
1	Walking for Pleasure	10.9	40.5	23.7	88.2
2	Playing Outdoor Sports	9.6	31.3	29.0	61.0
3	Driving for Pleasure	8.1	29.6	13.4	49.3
4	Swimming Pool	4.4	5.3	10.9	13.0
5	Picnicking	3.9	12.1	6.6	20.8
6	Sledding & Tobogganing	2.4	2.8	5.4	6.1
7	Sightseeing	2.3	6.0	4.4	11.2
8	Swimming Beach	2.3	3.0	4.8	6.2
9	Fishing	1.7	3.1	2.5	4.6
10	Boating	1.6	2.9	3.3	6.1
11	Attending Outdoor Sports	1.5	4.4	2.6	7.5
12	Nature Walks	1.5	3.6	3.1	7.6
13	Horseback Riding	0.8	2.2	1.5	3.9
14	Attending Outdoor Concerts	.6	1.1	1.4	2.4
15	Ice Skating	0.6	0.6	1.1	1.2
16	Camping	0.5	0.9	1.2	1.9

By 1990, this list would grow to include all but one of the surveyed activities. Additional activities would include bicycling, hiking, snow skiing and water skiing.

SUMMARY OF REGIONAL DEMANDS AND REQUIREMENTS

Following is a ranking of activities for which a 1970 peak season demand of one-half million or more occasions was calculated for the Suburban Washington Region, with the calculated annual demand for 1970. The changes in ranking and magnitude of activities between 1970 and 1990 are useful in continuing county and regional recreation planning.

TABLE 21
SUMMARY — DEMAND, LAND AND FACILITIES 1970, 1990 — SUBURBAN WASHINGTON REGION

Activity	Annual Demand* [# of occasions]		Total Land and Facility Requirements			
	1970	1990	1970 Deficit (Surplus)	1990 Deficit (Surplus)	1990 Deficit (Surplus)	1990 Deficit (Surplus)
Walking for Pleasure	40.5	88.2	813 acres 813 miles	**	1771 acres 1,771 miles	**
Playing Outdoor Sports	31.3	61.0	5,755 acres 8710 acres	4,429	11,219 acres 14,508 acres	9,893
Driving for Pleasure	29.6	49.3	670 miles	620	1,116 miles	1,066
Swimming Pool	5.3	13.0	61 acres	40	149 acres	129
Picnicking	12.1	20.8	960 acres 19,200 tables	17,153	1654 acres 33,080 tables	31,033
Sightseeing	6.0	11.2	98 acres 195 miles	**	183 acres 365 miles	**
Swimming Beach	3.0	6.2	238 acres	237	495 acres	494
Fishing	3.1	4.6	422 acres	390	613 acres	581
Boating	2.9	6.1	34,440 acres 13,776 slips	13,615	71,162 acres 28,464 slips	28,303
Attending Outdoor Sports	4.4	7.5	113 acres 45,136 seats	26,636	191 acres 76,522 seats	58,022
Nature Walks	3.6	7.6	1480 acres 296 miles	262	3080 acres 616 miles	582
Horseback Riding	2.2	3.9	3585 acres 717 miles	681	6490 acres 1,298 miles	1,262
Attending Outdoor Cultural Activities	1.1	2.4	57 acres 19,071 seats	2,421	125 acres 41,729 seats	25,079
Ice Skating	0.6	1.2	72 acres	54	136 acres	118
Camping	0.9	1.9	308 acres 2,156 sites	283	689 acres 4,823 sites	664
Bicycling	1.2	2.1	530 acres 106 miles	69	955 acres 191 miles	154
Water Skiing	0.3	0.8	9,701 acres 6895 acres	**	27,820 acres 11,170 acres	**
Hiking	0.8	1.2	1,379 miles	1,308	2,234 miles	2,163
Snow Skiing	0.3	0.6	239 acres develop.	229	539 acres develop.	529
Hunting	0.2	0.2	17 rope tows	16	16 rope tows	14
Sledding	2.8	6.1	16,539 acres 443 acres	13,062	24,106 acres 974 acres	20,629

* Millions of Occasions—

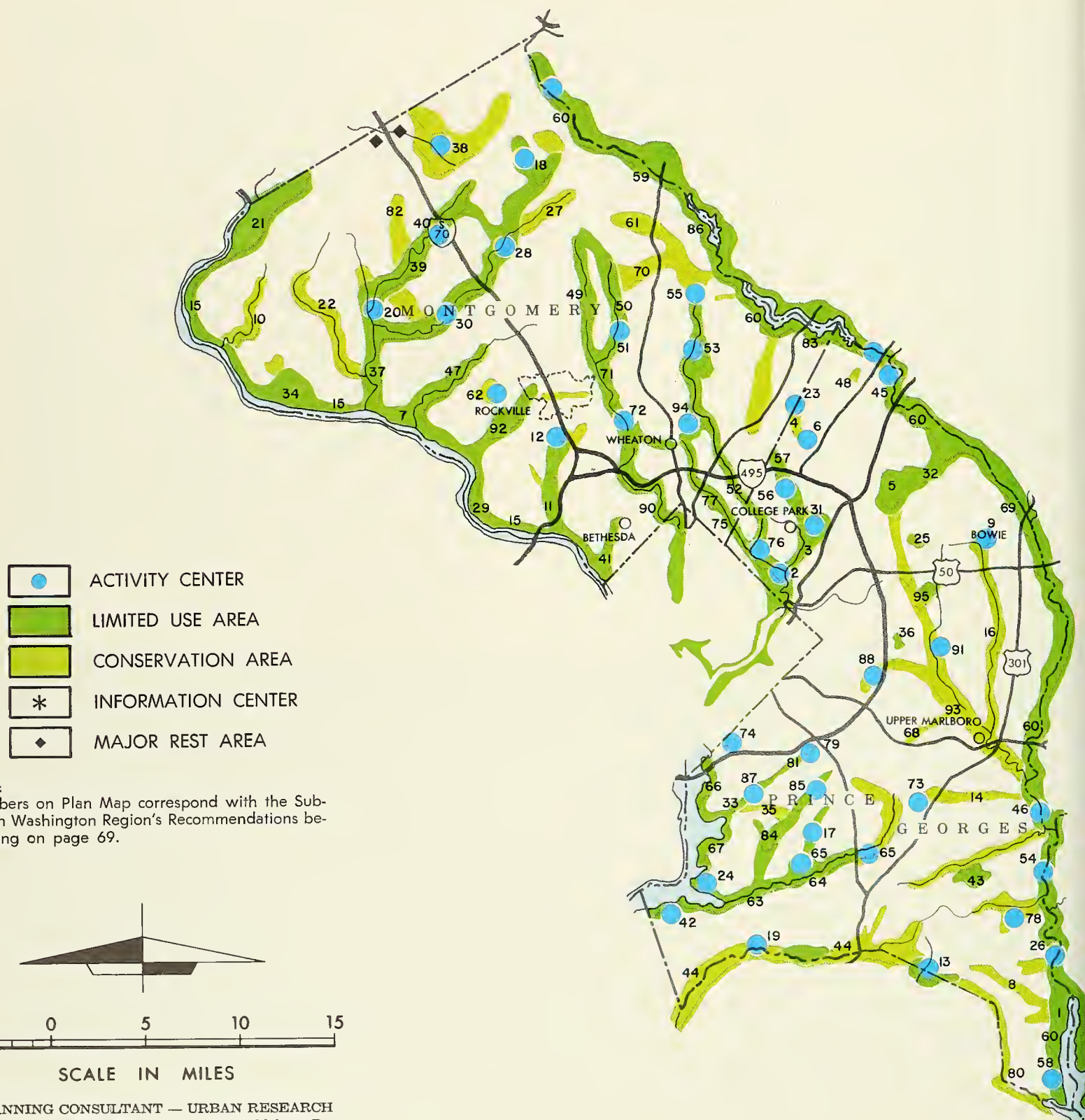
** Information not available for determining deficits

() Amount of land and facilities exceeding demand requirements



COMPREHENSIVE OUTDOOR RECREATION AND OPEN SPACE PLAN

Suburban Washington Region



DETAILED REGIONAL RECOMMENDATIONS

The following list, which is number coded to the accompanying Regional Map, elaborates upon the characteristics of the recommended open space and recreation areas for the Suburban Washington Region. The major orientation of each recommended area, suggested compatible recreation activities, potential participants and possible actions for carrying out each recommended open space and recreation area are described.

If an area should be given particular emphasis in future acquisition or development activities, it is designated as an Area of Emphasis. The accompanying list serves as a guideline for decision making and provides a basis for further dialogue between the State and the jurisdictions within the Planning Region in further refining recreation and open space recommendations.

POTENTIAL PARTICIPANTS
F - Federal
S - State
C - County
M - Municipal
Q - Quasi Public
P - Private

PLAN CATEGORY
AC - Activity Center
LU - Limited Use
CA - Conservation

SUBURBAN WASHINGTON REGION RECOMMENDATIONS

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
1 Acquasco Farm	Wildlife	Wildlife Conservation and Compatible General recreation	S	Preserve unique wildlife habitat	CA	
2 Anacostia Activity Center	Waterfront	Boating, fishing, picnicking, hiking	C	Expand recreation facilities	AC	
3 Anacostia River Park	Stream Valley	Hiking, picnicking	C	Continue the maintenance of land	LU	
4 Beltsville Bog	Unique natural area	Hiking	C, S	Preserve in open space through fee simple	CA	
5 Beltsville Limited Recreation	Limited Recreation	Picnicking, hiking, birdwatching, limited sports	F	Develop a master plan for recreation areas	LU	
6 Beltsville Recreation Area	Intensive Recreation Uses	Hiking, limited camping, picnicking, sports	C	Acquire land for the development of intensive recreation facilities that are linked to Fairland by a limited use area. (Little Paint Branch)	AC	
7 Black Paint Recreation Area	Water & limited recreation use	Hiking, sightseeing, nature study, fishing, picnicking	C	Acquire land through fee simple for a node of limited recreation use oriented to a reservoir if proved practical by an environmental impact study	LU	
8 Black Swamp Creek	Water and Natural Area	Hiking, conservation & wildlife	C, P	Preserve land along Creek through zoning, easements and other techniques than fee simple	CA	
9 Bowie/Whitemarsh Recreation Area	Intensive Recreation Uses	Sports, picnicking, hiking	C, M	Continue program and the addition of recreation facilities	AC	
10 Broad Run Conservation Area	Natural area	Hiking & birdwatching	C	Acquire through other than fee simple to preserve in open space	CA	
11 Cabin John Creek	Natural stream valley & limited recreation	Hiking, nature study	C	Continue acquiring land to create a contiguous stream valley	LU	
12 Cabin John Regional Park	Intensive recreation uses	Picnicking, sports, hiking, nature study, swimming	C	Continue maintenance and expand facilities when necessary	AC	
13 Cedarville State Park and Forest	Forest and Multipurpose Recreation Area	Swimming, picnicking, camping, hiking, nature study	S	More recreation development	AC	*
14 Charles Branch Conservation Area	Water & Natural Area	Hiking, nature study, birdwatching	C, S	Preserve land to maintain open space between the Patuxent River and the proposed Rosaryville State Park	CA	
15 Chesapeake and Ohio Canal	Potomac River & Natural area	Bicycling, hiking, boating, fishing, nature study	F	Restore & maintain aqueducts, towpath & Canal & extend westward & rewater canal where feasible	LU	*
16 Collington Branch Conservation Area	Water and Natural Area	Nature study, hiking, birdwatching	C	Preserve land through other than fee simple acquisition techniques	CA	
17 Cosca Regional Park	Intensive recreation uses	Hiking, nature study, picnicking, limited camping	C	Construct additional recreation facilities	AC	
18 Damascus Regional Park	Intensive recreation uses	Hiking, picnicking, limited sports, limited camping	C	Develop facilities	AC	
19 Danville Regional Park	Lake and Nature-Oriented Recreation Area	Swimming, boating, hiking, fishing, camping, nature study, picnicking	C, S	Acquire land and carefully incorporate into surrounding conservation-oriented area	AC	
20 Dawsonville Regional Park	Intensive recreation uses	Picnicking, limited sports, limited camping, hiking	C	Develop facilities	AC	
21 Dickerson Regional Park	Natural & limited recreation	Hiking, nature study, picnicking	C	Preserve natural character & develop for limited recreation usage	LU	
22 Dry Seneca Creek Conservation Area	Natural stream valley	Hiking & birdwatching	C	Acquire to preserve in open space	CA	
23 Fairland Regional Park	Intensive Recreation Uses	Hiking, limited camping, picnicking, sports	C	Acquire land for the development of a major regional park	AC	
24 Fort Washington Federal Park	Waterfront	Picnicking, limited sports, walking, sightseeing	F	Maintain and construct additional facilities as needed	AC	
25 Glenn Dale Recreation Area	Lake-oriented recreation activities	Boating, swimming, fishing, hiking, limited picnicking	C	Acquire land for water-oriented recreation area if environmental impact study shows practical	LU	

SUBURBAN WASHINGTON REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
26 Goldsmith Recreation Area	Patuxent River recreation	Boating, swimming, fishing & picnicking	C	Acquire land for a relatively small water-oriented recreation area	AC	
27 Goshen Branch Conservation Area	Natural area	Hiking & birdwatching	C	Acquire through other than fee simple	CA	
28 Goshen Regional Park	Intensive recreation uses	Picnicking, sports, hiking, nature study	C	Continue land acquisition & develop	AC	
29 Great Falls and Bear Island Recreation Area	Waterfall and recreation uses; unique geology	Sightseeing, fishing, picnicking, hiking	F	Continue maintenance and expand facilities when necessary- geologic research	LU	
30 Great Seneca State Park	Intensive recreation uses	Picnicking, limited sports, hiking, camping	S	Development of facilities	AC	
31 Greenbelt Regional Park	Intensive Recreation Activities	Camping, hiking, nature study, picnicking, sports	F, C	Continue adding new recreation facilities	AC	
32 Hall Recreation Area	Nature-oriented recreation activities	Nature study, hiking, birdwatching, limited picnicking	C	Continue county program	LU	
33 Henson Creek	Limited recreation use & open space	Hiking, picnicking	C	Continue to acquire land along the stream valley	LU	
34 Horsepen Regional Park	Nature & limited recreation	Hiking, nature study, limited picnicking	C	Preserve natural character & develop for limited recreation usage	LU	
35 Hunters Mill Branch	Natural area	Hiking & nature study	C	Acquire through other than fee simple to link Henson Creek and Tinkers Creek	CA	
36 Kuenng Recreation Area	Limited Recreation uses	Picnicking, sports, hiking	C	Acquire land for a relatively small limited recreation use area	LU	
37 Little and Great Seneca Limited Use area	Natural stream valley	Hiking, nature study	C	Acquire land thru fee simple & less than fee to connect series of activity centers. Connect State owned McKas-Bashers area to Seneca State Park & coordinate development with C&O Canal National Park	LU	
38 Little Bennett Regional Park	Natural blended with intensive recreation uses	Camping, picnicking, limited sports, hiking	C	Continue to acquire more land through fee simple & develop facilities	AC	
39 Little Seneca Recreation Area	Water recreation uses	Swimming, fishing, picnicking	C	Acquire land for a recreation area if environmental impact study shows practical	LC	
40 Little Seneca Regional Park	Intensive recreation uses	Hiking, picnicking, limited sports	C	Develop facilities	AC	
41 Little Falls Park	Natural stream valley & limited recreation	limited camping Hiking, nature study, picnicking, limited sports	C	Continue maintenance and addition of facilities at existing nodes of limited recreation use	LU	
42 Manoyne Recreation Area	Water	Swimming, fishing, hiking, picnicking	C	Acquire land for reaction area	AC	
43 Mataponi Creek Conservation and Recreation Area	Conservation and limited activities	Swimming, hiking, limited picnicking, nature study	C, P	Acquire land for limited use area and utilize other than fee simple techniques to preserve land along Creek	LU, CA	
44 Mattawoman Natural Environmental Area	Wetlands, Forest & Wildlife	Hiking, Nature study, Fishing	S	Acquisition of land along both sides of creek and connect with Cedarville State Forest and Park Area. Prepare Management Plan	CA	
45 Montpelier Recreation Area	Intensive Recreation Uses	Sports, fishing, swimming, hiking, picnicking	C	Acquire land for the development of intensive recreation facilities	AC	
46 Mt. Calvert Regional Park	Water and intensive recreation uses	Camping, boating, swimming, fishing, hiking, nature study	S, C	Acquire land for a multi-purpose recreation area	AC	
47 Muddy Branch	Natural stream valley	Hiking, nature study	C	Continue to acquire land to form one contiguous stream valley	LU	
48 Muirkirk Bog	Unique natural area	Hiking	C, S	Preserve in open space through fee simple	CA	
49 Needwood Lake Recreation Area	Water & limited recreation uses	Swimming, fishing, hiking, limited picnicking	C	Develop facilities	LU	
50 Norbeck Branch	Natural area	Hiking & birdwatching	C	Acquire additional land to link up with Rock Creek	LU	
51 Norbeck Recreation Area	Water & limited recreation uses	Swimming, fishing, hiking, limited picnicking	C	Develop facilities	AC	
52 Northwest Branch Park	Stream Valley	Picnicking, hiking, nature study	C	Continue the maintenance of the land	LU	
53 Northwest Branch Recreation Area	Intensive recreation use	Sports, picnicking, hiking	C	Acquire additional land through fee simple and develop	AC	
54 Nottingham Regional Recreation Area	Water and recreation	Boating, swimming, hiking, fishing, picnicking, nature study, sports	C	Acquire land through fee simple for large multi-purpose park	AC	
55 Olney Regional Plan	Nature & intensive recreation uses	Hiking, picnicking, limited sports	C	Acquire land in fee simple for the development of a regional park	AC	
56 Paint Branch Activity Center	Golf	Golf	C	Develop golf course and ancillary facilities	AC	
57 Paint Branch Park	Stream Valley	Hiking, Picnicking	C	Continue acquiring land	LU	
58 Parrack Recreation Area	Patuxent River	Boating, swimming, fishing & picnicking	C	Acquire land for a relatively small activity center that is water-oriented	AC	
59 Patuxent Recreation Area	Patuxent River & natural area	Hiking, limited picnicking, nature study, swimming, fishing	C	Develop facilities	LU	
60 Patuxent River	Scenic River	Hiking, swimming, nature study	C, S	Utilize fee simple acquisition, easements and other techniques to preserve land along the entire length of River. Department of Natural Resources implement Scenic Rivers Plan	LU	
61 Patuxent River Watershed Area	Natural area & limited recreation	Hiking, nature study	C	Continue to acquire land to preserve in open space	CA	
62 Piney Grove Regional Park	Intensive recreation uses	Picnicking, nature study, hiking, sports, swimming	C, S	Acquire land for multi-purpose recreation area	AC	
63 Piscataway Creek Indian Village	Historic	Sightseeing	C, S	Preserve area	LU	
64 Piscataway Creek Park	Stream valley	Hiking, fishing, nature study	C	Acquire land through fee simple	LU	
65 Piscataway Creek Recreation Center	Water recreation use	Swimming, picnicking, hiking, sports, nature study, boating	C	Construct reservoir if environmental impact study shows practical	AC	

SUBURBAN WASHINGTON REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
66 Potomac River Limited Use Corridor	Waterfront	Hiking, picnicking	C, F, S	Utilize easements, less than fee acquisition	LU	
67 Potomac River Waterfront Park	Waterfront	Picnicking, sightseeing, limited sports	F	Continue to maintain & add additional facilities	LU	
68 Randall Recreation Area	Limited recreation use	Hiking, picnicking, limited sports	C	Acquire land for a relatively small limited recreation use area	LU	
69 R. C. Coy Recreation Area	Limited recreation uses	Sports, fishing, swimming, hiking, picnicking	C	Acquire land for limited recreation use	LU	
70 Reddy Branch	Natural area	Hiking & birdwatching	C	Acquire land in fee simple or other technique to preserve in open space	CA	
71 Rock Creek Park	Water & natural stream valley	Hiking, limited picnicking, fishing	C	Maintain	LU	
72 Rock Creek Regional Park	Intensive recreation use	Swimming, picnicking, sports, hiking, nature study	C	Maintain & develop additional facilities	AC	
73 Rosaryville State Park	Intensive recreation use	Camping, hiking, nature study, fishing, historic, cultural	S	Acquire land for a new State Park, prepare Master Plan & implement facility development	AC	
74 St. Elizabeth Activity Center	Intensive recreation uses	Picnicking, sports, hiking	C	Acquire land through fee simple and develop for intensive recreation use	AC	
75 Sligo Creek Park	Stream valley	Picnicking, hiking, nature study	C	Continue the maintenance of the land	LU	
76 Sligo/Northwest Branch Activity Center	Stream Valley, recreation	Picnicking, sports, hiking, nature study	C	Expand recreation facilities	AC	
77 Sligo Park Recreation Area	Limited recreation uses	Picnicking, hiking, nature study	C	Maintain & develop additional facilities	LU	
78 Spice Creek Recreation Area	Water and recreation	Boating, swimming, hiking, fishing, picnicking and nature study	C	Acquire land for water-oriented recreation area if environmental impact study shows practical	AC	
79 Suitland Bog	Unique natural area	Hiking	C, L	Preserve in open space through fee simple	CA	
80 Swanson Creek	Water, Forest & Open Space	Conservation, Wildlife and hiking	C, P	Preserve land along Creek through zoning, easements	CA	
81 Temple Hills Recreation Area	Intensive Recreation Use	Sports, picnicking	C	Continue to develop additional recreational facilities	AC	
82 Tenmile Creek Conservation Area	Natural stream valley	Hiking & birdwatching	C	Acquire through other than fee simple	CA	
83 T. Howard Duckett Reservoir	Water-oriented limited recreation uses	Hiking, picnicking, fishing	C	Continue and expand the limited use of recreation facilities at the reservoir	LU	
84 Tinkers Creek	Natural area	Hiking & nature study	C	Acquire through other than fee simple to link Henson Creek and Tinkers Creek	LU	
85 Tinkers Creek Activity Center	Water-oriented recreation	Boating, swimming, picnicking, fishing, hiking	C	Develop water-oriented recreation area if environmental impact study shows as practical	AC	
86 Tridelphia Reservoir	Water & limited recreation use	Fishing, hiking, nature study, limited picnicking	C	Maintain & develop additional facilities	LU	
87 Tucker Recreation Area	Intensive Recreation Use	Sports, picnicking	C	Continue to develop additional recreational facilities	AC	
88 Walker Mill Regional Park	Intensive Recreation Use	Sports, hiking, picnicking	C	Continue the development of recreation facilities and preserve land which connects Park to the Western Branch Conservation Area	AC, C	
89 Warren Recreation Area	Intensive Recreation Uses	Sports, fishing, swimming, hiking, picnicking	C	Acquire land for the development of intensive recreation facilities	AC	
90 Washington Metro Regional Trail System Trails		Hiking, bicycling & horseback riding	C, S	Prepare master plan Acquire land rights, Use utility right of ways where possible		
91 Watkins Regional Park	Intensive Recreation Uses	Picnicking, nature study, swimming, limited camping, sports	C, S	Develop a large multi-purpose recreation area	AC	
92 Watts & Kolgour Branch Limited Use	Natural stream valley	Hiking, nature walks	C	Acquire land through fee simple	LU	
93 Western Branch Conservation Area	Natural Area & Water	Hiking, nature study, birdwatching	C	Emphasize other than fee simple techniques to preserve land	C	
94 Wheaton Regional Park	Intensive recreation uses	Sports, picnicking, swimming, hiking, nature study	C	Maintain & develop additional facilities	AC	
95 White Recreation Area	Limited Recreation Uses	Hiking, limited picnicking, sports	C	Acquire land within the Western Branch Area for a node of limited recreation activity	LU	



SOUTHERN MARYLAND REGION

REGIONAL ORIENTATION

Southern Maryland is predominantly agricultural in nature, characterized by scattered development and extensive bay and river shoreline. These features along with the Region's proximity to the Washington Metropolitan Area, will continue to influence development pressures in Charles County. At the same time, demand for second homes and vacation cottages with accompanying recreation opportunities will continue to increase in St. Mary's and Calvert Counties.

While the Region's extensive shoreline provides outstanding recreation opportunities, other features should be developed more intensively. These include the historic resources in the area, many of which are in sound condition. St. Mary's City, a unique historical park which encompasses the First settlement in Maryland, should receive special emphasis.

The geologic features in all three counties and some of the numerous ecological areas, which are still relatively unspoiled, warrant attention. The lands that surround many of these sites must be preserved selectively to protect unique or endangered resources.

These unique natural areas provide a partial basis for analysis of the Southern Maryland Region. Conservation and Limited Use Areas follow most of the Region's network of stream valleys and miles of shoreline; they also accompany geologic and historic areas. Activity Centers, too, are located at some historic areas and in areas suitable for providing facilities that meet the greatest recreation demands in the Region.

Fortunately, many of Southern Maryland's resources lend themselves to the accommodation of recreation activities for which the regional demand is greatest. Demand studies indicate that swimming on the beach is the most popular activity in the Region with three additional water-oriented recreational activities (fishing, boating, and water skiing) among the ten most popular. Three others — driving for pleasure, sightseeing, and walking — can be well-served by the Region's historic and geologic features. Picnicking should be provided as an auxiliary activity to all appropriate recreational facilities.

Special emphasis in the Region should be given to developing both scenic road and trail systems, with appropriate interpretive facilities. The scenic road system should include adequate controls to minimize disruption of the landscape, for the sake of visitors and residents. Strategically spaced and well-designed rest stops with information centers should be developed throughout the Region.

The State should adopt the proposed Potomac Heritage Trail and incorporate the trail into a well-defined county/intercounty trail system. However, the concept of the Potomac Heritage Trail should be expanded in scope. A historic route should be developed for both automobile and bicycle travel which would highlight the Region's cultural, historic, geologic, and recreational resources. A similar recreation trail could be developed for boating enthusiasts along the region's extensive shoreline.

Outdoor education and recreation in the Region can be made more meaningful and fulfilling by developing a number of interpretive centers in selected State Parks. Such facilities could then be integrated into the recreational and education programs of each of the counties. Local emphasis should be directed towards the further development of school/park recreation complexes to maximize county recreational opportunities, fiscal resources, and physical facilities. Community-wide and county-wide facilities should be acquired and developed to supplement the school/park system.

The Southern Maryland Region also possesses outstanding opportunities for the development of private recreation facilities, particularly in camping, marinas, the preservation of historic places for public viewing, and the development of tourism facilities which would relate to and complement the recreation and historic character of the Region. Government should assist and encourage such private development in conjunction with public facilities and in other areas where revenue-producing facilities could be provided.

SUMMARY OF REGIONAL DEMANDS AND REQUIREMENTS

The following is a ranking of activities for which a 1970 peak season demand of one-half million or more occasions was calculated for the Southern Maryland Region, with the calculated annual demand for 1970 and 1990. Changes in ranking and magnitude of activities between 1970 and 1990 are useful in continuing county and regional recreation planning.

Table 22					
PEAK SEASON AND ANNUAL DEMAND RANKED BY ACTIVITY—1970, 1990 Southern Maryland Region					
Rank	Activity	1970 (millions of occasions)		1990 (millions of occasions)	
		Peak Season	Annual	Peak Season	Annual
1	Swimming Beach	2.9	3.7	6.0	7.7
2	Driving for Pleasure	2.6	9.7	4.4	16.2
3	Picnicking	1.5	4.6	2.5	7.8
4	Sightseeing	1.4	3.5	2.5	6.5
5	Fishing	1.1	2.0	1.6	2.9
6	Boating	0.8	1.5	1.7	3.2
7	Walking for Pleasure	0.8	2.8	1.4	5.2
8	Hunting	0.6	1.2	0.9	1.7
9	Playing Outdoor Sports	0.6	1.9	1.0	3.1
10	Water Skiing	0.5	0.7	1.3	1.8

By 1990, this list would grow to include camping, horseback riding and swimming in outdoor pools.



TABLE 23 SUMMARY — DEMAND, LAND AND FACILITIES 1970, 1990 — SOUTHERN MARYLAND REGION						
Activity	Annual Demand* (# of occasions)		Total Land and Facility Requirements			Deficit (Surplus)
	1970	1990	1970	Deficit (Surplus)	1990	
Walking for Pleasure	2.8	5.2	113 acres 113 miles	**	209 acres 209 mile	**
Playing Outdoor Sports	1.9	3.1	345 acres	(504)	571 acres	(278)
Driving for Pleasure	9.7	16.2	2860 acres 220 miles	**	4758 acres 366 miles	**
Swimming Pool	0.4	0.7	4 acres	3	8 acres	7
Picnicking	4.6	7.8	724 acres 7,240 tables	671 6,132	1,248 acres 12,480 tables	1,195 11,372
Sledding	0.1	0.2	19 acres 57 acres	**	38 acres 106 acres	**
Sightseeing	3.5	6.5	113 miles	80	211 miles	178
Swimming Beach	3.7	7.7	295 acres	277	614 acres	596
Fishing	2.0	2.9	267 acres	127	387 acres	247
Boating	1.5	3.2	17,893 acres 7,157 slips	17,547 6,823	37,193 acres 14,877 slips	36,847 14,543
Attending Outdoor Sports	0.5	0.9	13 acres 5,243 seats	**	22 acres 8,729 seats	**
Nature Walks	0.3	0.5	110 acres 22 miles	**	195 acres 39 miles	**
Horseback Riding	0.9	1.7	1505 acres 301 miles	290	2730 acres 546 miles	535
Attending Outdoor Cultural Facilities	0.04	0.1	2 acres 718 seats	**	5 acres 1584 seats	**
Ice Skating	0.1	0.3	17 acres	**	32 acres	**
Camping	0.6	1.3	270 acres 1,890 sites	209 1,507	604 acres 4,228 sites	543 3,845
Bicycling	0.1	0.2	50 acres 10 miles	**	75 acres 15 miles	**
Water Skiing	0.7	1.8	23,041 acres	**	60,425 acres	**
Hiking	0.4	0.8	13080 acres 2,616 miles	**	28,025 acres 5,605 miles	**
Snow Skiing	0.02	0.03	0 ac. develop.	**	0 ac. develop.	**
Hunting	1.2	1.7	120,965 acres	120,123	178,545 acres	17,770

* Millions of Occasions
 ** Information not available for determining deficits
 () Amount of land and facilities exceeding demand requirements

COMPREHENSIVE OUTDOOR RECREATION AND OPEN SPACE PLAN

Southern Maryland Region



PLANNING CONSULTANT — URBAN RESEARCH
& DEVELOPMENT CORPORATION, Bethlehem, Pa.

Note:
Numbers on Plan Map correspond with the Southern Maryland Region's Recommendations beginning on page 75.

DETAILED REGIONAL RECOMMENDATIONS

The following list, which is number coded to the accompanying Regional Map, elaborates upon the characteristics of the recommended open space and recreation areas for the Southern Maryland Region. The major orientation of each recommended area, suggested compatible recreation activities, potential participants and possible actions for carrying out each recommended open space and recreation area are described.

If an area should be given particular emphasis in future acquisition or development activities, it is designated as an Area of Emphasis. The accompanying list serves as a guideline for decision making and provides a basis for further dialogue between the State and the jurisdictions within the Planning Region in further refining recreation and open space recommendations.

POTENTIAL PARTICIPANTS

F - Federal
S - State
C - County
M - Municipal
O - Quasi Public
P - Private

PLAN CATEGORY

AC - Activity Center
LU - Limited Use
CA - Conservation

SOUTHERN MARYLAND REGION RECOMMENDATIONS

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
1 Battle Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning	CA	
2 Battlecreek Swamp	Bald cypress swamp	Interpretative trails, hunting, nature study	S	Acquisition. Recommend as a U. S. National Landmark	CA	
3 Blakiston Island	Heavily wooded island	Natural and historic study	C, S	Acquisition in fee	CA	
4 Budds Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, nature study, hunting	S, C	Acquire easements or development rights, conservation zoning	CA	*
5 Calvert Beach & Long Beach	Beachfront	Swimming, fishing, boating	P, S	Private recreation or possible government acquisition, development and management	AC	
6 Calvert Cliffs	Geological, archeologic	Nature study, scientific research, hiking, surveying, hunting, camping and day use activities	S	State easements or acquisition, recommend development rights develop state park	CA, AC	*
7 Calvert Cliffs State Park	Unique Bay — geologic orientation hiking, nature study, fishing	Beach swimming, camping, picnicking.	S	Develop recreation opportunities in accordance with the resources and carefully police park & complete acquisition	AC	*
8 Cedarville State Park & Forest	Multi-purpose recreation area & Forest management	Camping, picnicking, swimming water-oriented recreation	S	More development for intensive recreation use. Relate to Mattawoman Environment Area	AC, CA	*
9 Chapel Point State Park	Natural water-oriented area	Low-intensity day use, historic trails picnicking boating, interpretive services	S	Acquire, prepare master plan and develop. Expand to include Blossom Point.	LU	*
10 Chaptico Run Conservation Area	Natural Stream Valleys	Hiking, birdwatching, nature study, hunting	C	Acquire easements or development rights, zoning	CA	
11 Chaptico Run Recreation Area	Natural water-oriented area	Limited picnicking, fishing, hiking	C	Acquire land through fee simple or acquire easements or development rights	LU	
12 Charleston Creek Recreation Area	Water-oriented Natural Area	Swimming, fishing, limited picnicking, hiking, boating	C	Acquire land for recreation	LU	
13 Cherryfield	Unique natural area	Boating, hiking, picnicking, camping	C	Acquire easements and development rights	CA	*
14 Chesapeake Beach	Beachfront	Swimming, fishing, boating, & other similar activities	P, S	Private recreation or possible government acquisition, development and management	AC	*
15 Chew & Cocktowan Creek Conservation Areas	Natural stream valley	Hiking, birdwatching, hunting	C	Conservation zoning	CA	
16 Cool Springs	Five springs, historic site	Sightseeing	C	Open to public tours	LU	
17 Cornfield Point	Geologic Fossils	Geologic interpretation, hiking	C	Acquire easements	CA	
18 Cove Point	Unique natural area & beach front	Swimming, fishing, picnicking, sightseeing	S	Acquire	CA, AC	
19 Dares Beach	Beachfront	Swimming, fishing, boating, picnicking	P, S	Private recreation or possible government acquisition, development and management	AC	*
20 Doncaster State Forest	Forest management conservation & wildlife	Hiking, primitive camping, hunting, nature study	S	Continue current management policies-prepare management plan	CA	
21 Drayden Geologic Section	Geologic Fossils	Geologic interpretation, hiking	C, S	Acquire easements	CA	
22 Drum Point Lighthouse	Historic, water-oriented	Sightseeing, picnicking, fishing	P	Private development and continuous maintenance	LU	
23 Fishing Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning or acquire easements or development rights	CA	
24 Gilbert Run Stream Valley and Recreation Area	Unique Natural Area	Limited picnicking, boating, fishing, swimming, nature study, limited sports (intensive use at reservoir)	C, S	Improve access to site and develop limited recreation facilities	AC, LU	*
25 Goose Creek Conservation Area	Waterfront	Hiking, nature study, fishing	C	Acquire development rights to scenic easements	CA	
26 Goose Point	Unique Natural Area	Boating, hiking, picnicking, camping	C, S	Acquire easements and development rights	LU	*
27 Grayton Talbot Terrace Scarp	Inland scarp geologic area	Geologic study, sightseeing interpretive trails	C	Easements or acquire development right	CA	*

SOUTHERN MARYLAND REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
28 Hall Creek Conservation Area	Natural stream valley	Hiking, birdwatching, hunting	C	Conservation zoning	CA	
29 Helen Creek	Hemlock Stand, Natural Area	Nature study, hiking, fishing	C	Conservation easements	CA	
30 Hunting Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning	CA	
31 Jamison Recreation Area	Natural Stream Valley & Reservoir	Swimming, hiking, fishing, picnicking	S, C	Develop recreation facilities consistent with resource area	LU	*
32 Indian Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning or acquire easements or development rights	CA	
33 Kitt's Point	Water-oriented	Natural Area — boating, hiking, fishing camping, picnicking	C	Acquire easements and development rights	CA	*
34 Leonardtown Recreation Area	Natural water-oriented area	Limited sports, picnicking, hiking, nature study, fishing and boating	C	Acquire land along Breton Bay for recreation.	AC	
35 Long Point Recreation Area	Water-oriented natural area	Fishing, picnicking, boating picnicking	C	Acquire through fee simple or acquire development rights	LU	
36 Lower Patuxent Recreation Area	Water-oriented	Fishing, picnicking, boating picnicking	C, S	Acquire through fee simple or acquire development rights	LU	
37 Lower Potomac Estuary	Potomac River	Sightseeing, hiking, limited camping, picnicking, fishing	F	Acquisition of land rights and scenic easements between Route 224 and the River from Chicamuxen Creek to Route 6	LU	
38 Patuxent River	Scenic River	Picnicking, boating, fishing, swimming sports	S, C	State acquisition through fee and less than fee with areas set aside for limited and intensive recreation use. Department of Natural Resources implement Scenic Rivers Plan. Prepare Master Plan	LU	*
39 Point Lookout State Park	Historical	Interpretative center, swimming, fishing, boating, picnicking	S	Develop recreation facilities	AC	*
40 Popes Creek	Unique natural feature (scarp) and natural scenic area	Camping, picnicking, fishing and hiking	C, P	Combination of County acquisition of geologic and private enterprise participating in development	LU	
41 Poplar Hill Creek Area	Beach	Camping, hiking, boating, fishing, swimming, nature study	C, S	Acquisition as a County or State Park with beach	AC	
42 Port Tobacco	Historic Town	Sightseeing, Tourism	P	Limited acquisition, private development of historic-related tourism activities, historic zoning	AC	
43 Port Tobacco Stream Valley	Natural Stream Valley	Hiking, nature study, hunting	C	Conservation zoning, acquire development rights and easements	CA	
44 Potomac Heritage Trail	Major Trail	Nature Study, hiking, horseback riding, bicycling	F	Acquisition in fee or less than fee, develop trail facilities	LU	*
45 Purse State Park	Water-oriented natural area	Hiking, nature study, picnicking, limited sports, camping	S	Prepare master plan & develop recreation facilities for intensive use	AC	
46 Maddox Talbot Terrace Scarp	Unique geologic formation	Geologic interpretation, hiking	C, S	Research agreement between State and owners	CA	
47 Marshall Hall	Beach	Recreation	F, S	Scenic easement or acquisition	AC	
48 Maryland Point	Forest & Some beach	Hiking, Nature Study low density residential	P, F	Low density zoning	LU	
49 Mattawoman Creek	Environmental Enhancement Area	Tidal portion — fishing boating, hiking, nature study	S, F	State & Federal ownership; connect Smallwood & Cedarville.	AC, LU, CA	*
50 McIntosh Run Valley Conservation	Natural Stream Valley	Limited picnicking, hiking nature study	C	Acquire development rights or easements or acquire through fee simple	LU	
51 Medley's Neck	Water-oriented	Swimming, boating, fishing, limited picnicking, nature study	C, S	Acquisition in fee	LU	*
52 Middle Patuxent Recreation Areas	Water-oriented natural area	Fishing, picnicking, boating	C	Acquire through fee simple or acquire development rights	LU	
53 Nanejemoy Creek Conservation Areas	Waterfront & Natural Stream Valleys	Hiking, swimming, hunting, nature study, fishing	C, S	Preserve unique ecological areas along the Nanjemoy and lands along the tributaries to creek through acquisition other than fee simple	CA	
54 Newburg Talbot Terrace	Geologic inland strip	Geologic study, interpretative trails	S, C	Easements or acquire segment for interpretative area	LU	*
55 Newport Run-Allens Fresh Recreation Area	Natural Area	Fishing, limited picnicking, hiking, nature study	S, C	Acquire land through fee simple for limited recreation use	LU	
56 Newton Neck	Water-oriented	Golf course, swimming picnicking, hiking	S, C	Protect estuary by State or County acquisition and limited recreation development	LU	
57 Redgate Talbot Terrace Scarp	Pleistocene Scarp	Nature/Geologic study, hiking	S	Agreement between State and owners	CA	
58 St. Clements Creek Valley Conservation	Natural stream valley	Limited sports, picnicking, nature study	C	Acquire development rights or easements or acquire through fee simple	LU	
59 St. Clements Island	Historic	Picnicking, historic interpretative center, hiking swimming	S	Develop and interpretative program and develop limited facilities	LU	
60 St. Clements Recreation Area	Natural water-oriented area	Limited sports, picnicking, hiking, nature study, fishing, boating	C	Acquire land along St. Clements Bay for recreation.	AC	
61 St. George Island	Water-oriented area	Swimming, fishing, hiking	C	Protect waterfront through Zoning	LU	
62 St. Inigoes Creek Area	Water-oriented development	Swimming, fishing, boating	C	Protect waterfront through Zoning	LU	
63 St. Inigoes Neck	Water-oriented	Boating, hiking, picnicking, camping	C, S	Acquire easements and development rights	CA	*
64 St. Leonard Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning and protection of waterfront	LU	
65 St. Mary's City	Historic	Historic tours, sightseeing	S, C	Implement St. Mary's City Plan	AC	*

SOUTHERN MARYLAND REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
66 St. Mary's River	Water-oriented natural area	Swimming, picnicking, hiking nature study, limited sports (intensive uses in park)	C, S	Complete acquisition prepare masterplan for state park & develop recreation facilities	AC, LU, CA	*
67 Sotterly	Historic	Historic Tours	P	Historic zoning	LU	
68 Smallwood State Park	Historic	Interpretative Center, picnicking, moderate camping, boating, fishing	S	Complete acquisition program & develop interpretative trails, complete park development	AC	*
69 Trent Hall Creek Conservation Area	Natural Stream Valley	Hiking, birdwatching, hunting	C	Conservation zoning or acquire easements or development rights	CA	
70 Trinity Recreation Area	Natural Stream Valley & Reservoir	Swimming, hiking, fishing, picnicking	S, C	Develop recreation facilities consistent with resource area	LU	*
71 Wicomico River	Water-oriented natural area	Boating, hiking, limited picnicking, nature study, fishing	S, C	Implement Scenic Rivers Plan	LU	*
72 Zekiah Swamp	Unique Natural Area	Hiking, hunting, low intensity interpretative trails	S, C	Acquire through fee simple and other techniques. Tie in with Wicomico Scenic Rivers Plan prepare Master Plan & Management Plan.	CA	*
73 Zekiah Swamp Recreation Area	Unique natural area	Interpretative center, picnicking, fishing, hiking	S	Acquire land through fee simple and develop interpretive facilities. Prepare Masterplan	LU	



UPPER EASTERN SHORE REGION

REGIONAL ORIENTATION

The Upper Eastern Shore is rural in character and sparsely developed. The natural topography varies from rugged wooded hillsides to slightly rolling open areas. The Chesapeake Bay is the Region's most significant water resource, with major rivers such as the Choptank, Chester, Sassafras, Elk, Northeast and Susquehanna penetrating into the Region, offering scenic, open space, recreation, wildlife and aquatic value. Wetlands do exist along the Upper Eastern Shore's waterways but not to the extent of the Lower Eastern Shore's vast areas. Yet, these wetlands are some of the State's most important fresh water breeding areas for aquatic life. The natural resource areas, including the heavily wooded northern portion of the region, are scenic attractions to residents and visitors and offer swimming beaches, fishing, boating, hunting and other water-oriented recreation opportunities that are so popular in this Region. A large number of particularly unique ecological areas also provide outstanding aquatic and wildlife habitats.

Moderate population growth is projected for the Upper Eastern Shore. Cecil County will continue to be the fastest growing area. Development pressures will continue to increase along the Chesapeake Bay, its estuaries and the major rivers because of the attraction of water for second homes and recreation opportunities. Some of the wetlands have been drained for housing, industry, other urban uses and for agricultural pursuits.

Nearly 48,000 publicly-owned outdoor recreation and open space acres exist on the Upper Eastern Shore. Most of this publicly-owned land, however, is in wildlife areas and is consequently restricted in use. The State Parks on the Upper Eastern Shore provide the major nodes of public recreation activity, particularly Elk Neck State Park, located strategically between Wilmington and Baltimore. The Tuckahoe State Park is still largely open land and immediate construction of recreation facilities is strongly encouraged. Wye Oak and Martinak State Parks are the other two state parks in the region.

Resident recreation demands are increasing, but the greatest impact is decidedly made by visitors from the Baltimore Region and out-of-state. In particular, the Philadelphia and Delaware Valley urbanized areas account for a considerable percentage of total recreation demand in the Region. This demand focuses on the Chesapeake Bay and its estuaries; it is not uncommon to find that over 60 percent of the visitors to Elk Neck State Park are from outside Maryland. This high proportion of out-of-state demand on this Region is expected to increase in the future.

The Region's greatest recreation demands are beach swimming, driving and sightseeing, picnicking, fishing, walking, hunting and boating. This is understandable, since the natural resources are expansive and oriented to serving these needs. Existing and future acquisition and recreation facility development should be oriented to meet the present and future demand for the popular recreation activities.



Special emphasis must be given to the waterfront and shoreline areas as having the most significant open space and outdoor recreation potential. Numerous strategic locations along the Bay and river estuaries should be acquired and developed through cooperative efforts by State and local governments. Unfortunately, many of the areas where these activities are undertaken are under constant pressures of shifting shorelines, which must be contained through joint efforts if the Region is to maintain its magnificent natural characteristics and facilities for recreation opportunities. Because of the proximity of growing metropolitan areas and water-oriented recreation demand, the Bay shoreline, estuaries, and Northeast, Elk, Bohemia, Sassafras, Chester, Miles, Tred Avon and Choptank Rivers should be investigated in detail to determine appropriate programs for environmental protection and the proper use of lands fronting these important bodies of water. In particular, areas of prime accessibility and development pressure including the Bay Bridge area along Route 50, and the upper end of the Bay should be evaluated as locations of recreation facilities and immediate preservation measures.

The Comprehensive Outdoor Recreation and Open Space Plan for the Upper Eastern Shore, like the Lower Shore Plan, stresses the importance of public access to major rivers and streams and the Chesapeake Bay.

The major stream valleys and lands along major rivers that are emphasized in the Plan include the Choptank, the Tuckahoe Creek, the Chester River east of Chestertown and the Sassafras River and the Susquehanna River.

Access to the Chesapeake Bay is emphasized, with the two largest potential areas being the eastern portion of Kent Island and Tilghman Island west of Easton. The eastern portion of Kent Island has excellent crabbing, fishing and other water-oriented recreation opportunities that are convenient to the Chesapeake Bay Bridge and are approximately an hour's drive from Annapolis and large portions of the Baltimore and Washington Metropolitan areas. The Tilghman Island area, while farther from the State's major urban centers, offers vast open land areas for outdoor recreation opportunities. Approximately 13 miles of Chesapeake Bay shoreline and land along the Harris Creek, Broad Creek and Miles River offer almost limitless recreation opportunities. The Bay and the rivers provide vast open spaces which would complement smaller activity areas along the shoreline.

Nearly every activity area shown on the Plan is water-oriented, signifying the importance of water to help meet the greatest recreation demands in the Upper Eastern Shore. These activity areas, because of the openness imparted by the Chesapeake Bay and other water bodies, could be relatively small and still retain an open space character that persons enjoy when seeking outdoor recreation opportunities.

Preservation of the Region's strategically located wetlands should be continued and emphasized because of their importance as Maryland's



prime fresh water breeding areas. Some wetlands should be set aside for hunting and fishing since most other such areas are on privately owned land.

Because of the high demand for driving and sightseeing, emphasis should also be given to developing a scenic roads and trail system with appropriate interpretative and rest centers that will fulfill demand requirements and link nodes of recreation activity along the Chesapeake Bay shoreline and river waterfront areas.

Local emphasis should be oriented to the development of recreation facilities near population concentrations. These may take the form of school/park recreation complexes to maximize county and municipal recreation opportunities, fiscal resources and physical facilities. In addition, community-wide and regional facilities should be located along the primary rivers and tributaries outlined in the Plan. The respective local governmental jurisdictions should undertake with the State's assistance, a program of acquisition and development of public access points at strategic locations along the Chesapeake Bay shore line estuaries and major rivers.

Table 24					
PEAK SEASON & ANNUAL DEMAND RANKED BY ACTIVITY—1970, 1990 Upper Eastern Shore					
		1970 (millions of occasions)		1990 (millions of occasions)	
Rank	Activity	Peak Season	Annual	Peak Season	Annual
1	Swimming Beach	2.7	0.3	5.6	7.2
2	Driving for Pleasure	2.5	9.3	4.2	15.5
3	Sightseeing	2.1	5.4	4.0	9.9
4	Picnicking	1.4	4.3	2.4	7.4
5	Fishing	1.3	2.4	1.9	3.5
6	Walking for Pleasure	1.0	3.5	1.6	6.1
7	Playing Outdoor Sports	0.8	2.5	1.2	3.8
8	Boating	0.8	1.5	1.7	3.1
9	Hunting	0.8	1.6	1.2	2.4

By 1990, this list would grow to include hiking, horseback riding, ice skating, swimming in outdoor pools, and water skiing.

All of the counties should have a program of local action related to conservation or flood plain zoning and techniques, such as scenic easements, to preserve key undeveloped natural resource areas. There is also a need for viable county recreation departments to implement plans and administer programs on a full-time basis.

Private enterprise is playing an increasingly larger role in the provision of recreation and tourism facilities, reflecting the demand being placed on the Region. Primarily, these facilities include marinas, boating, related activities, camping, second homes, and vacation accommodations. These activities should be encouraged to continue and expand within an overall guiding framework that will not endanger the natural resources, particularly the water and shoreline areas which have made the Region a desirable recreation area. It is recommended that these facilities be located and developed in a manner to complement State and local recreation facilities where revenue-producing facilities are required.

SUMMARY OF REGIONAL DEMANDS AND REQUIREMENTS






Following is a ranking of activities for which a 1970 peak season demand of one-half million or more occasions was calculated for the Upper Eastern Shore Region, with the calculated annual demand for 1970. Changes in ranking and magnitude of activities between 1970 and 1990 are useful in continuing county and regional recreation planning.

TABLE 25 SUMMARY — DEMAND, LAND AND FACILITIES 1970, 1990 — UPPER EASTERN SHORE REGION						
Activity	Annual Demand* (# of occasions)		Total Land and Facility Requirements			
	1970	1990	1970	Deficit (Surplus)	1990	Deficit (Surplus)
Swimming Beach	0.3	7.2	278 acres	4,206	581 acres	97
Driving for Pleasure	9.3	15.5	2743 acres 211 miles 88 acres	**	4563 acres 351 miles 165 acres	**
Sightseeing	5.4	9.9	176 miles	**	330 miles	**
Fishing	2.4	3.5	324 acres	283	470 acres	429
Walking for Pleasure	3.5	6.2	142 acres	**	245 acres	**
Playing Outdoor Sports	2.5	3.8	142 miles	**	245 miles	**
Swimming Pool	0.4	0.8	454 acres	31	702 acres	279
Water Skiing	1.1	0.9	5 acres	(8)	9 acres	(4)
Horseback Riding	0.7	1.3	11,681 acres	**	30,673 acres	**
Hiking	0.5	1.0	1205 acres		2180 acres	
Ice Skating	0.3	0.5	241 miles	233	436 miles	428
Picnicking	4.3	7.4	13380 acres		37215 acres	
Boating	1.5	3.1	2,676 miles	2,643	7,443 miles	7,410
Camping	0.3	0.6	29 acres	25	57 acres	53
Snow Skiing	0.001	0.003	686 acres	627	1,184 acres	1,125
Attending Outdoor Cultural Events	0.1	0.2	6,860 tables	6,545	11,840 tables	11,525
Attending Outdoor Sports Events	0.4	0.6	17,551 acres	17,490	36,425 acres	36,364
Bicycling	0.1	0.2	7,020 slips	6,619	14,570 slips	14,169
Nature Walking	0.3	0.6	127 acres	5	285 acres	163
Sledding	0.1	0.2	889 sites	90	1,995 sites	1,196
Hunting	1.6	2.4	1 Acre Devel. 0 rope tow	**	3 ac. develop. 0 rope tow	**
			3 acres		7 acres	
			1,045 seats	228	2,272 seats	1,455
			10 acres		16 acres	
			3,795 seats	1,795	6,457 seats	4,457
			55 acres		80 acres	
			11 miles	**	16 miles	**
			135 acres		250 acres	
			27 miles	24	50 miles	47
			23 acres	22	40 acres	39
			164392 acres	**	242711 acres	**

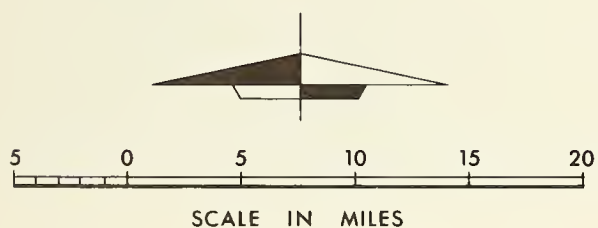
* Millions of Occasions
 ** Information not available for determining deficits
 () Amount of land and facilities exceeding demand requirements

COMPREHENSIVE OUTDOOR RECREATION AND OPEN SPACE PLAN

Upper Eastern Shore

-  ACTIVITY CENTER
-  LIMITED USE AREA
-  CONSERVATION AREA
-  INFORMATION CENTER
-  MAJOR REST AREA

Note:
Numbers on Plan Map correspond with the Upper
Eastern Shore's Recommendations beginning on
page 81.



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CHESAPEAKE



DETAILED REGIONAL RECOMMENDATIONS

The following list, which is number coded to the accompanying Regional Map, elaborates upon the characteristics of the recommended open space and recreation areas for the Upper Eastern Shore Region. The major orientation of each recommended area, suggested compatible recreation activities, potential participants and possible actions for carrying out each recommended open space and recreation area are described.

If an area should be given particular emphasis in future acquisition or development activities, it is designated as an Area of Emphasis. The accompanying list serves as a guideline for decision making and provides a basis for further dialogue between the State and the jurisdictions within the Planning Region in further refining recreation and open space recommendations.

POTENTIAL PARTICIPANTS
F - Federal
S - State
C - County
M - Municipal
Q - Quasi Public
P - Private

PLAN CATEGORY
AC - Activity Center
LU - Limited Use
CA - Conservation

UPPER EASTERN SHORE REGION RECOMMENDATIONS

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
1 Betterton Activity Center	Intensive recreation use	Boating, fishing, camping, picnicking	C, P	Continue & expand thru cooperative county & private efforts	AC	*
2 Big Elk Creek River	Meandering stream valley	Fishing, hiking	F	Develop in accordance with SCS 566 Plans	LU, CA	*
3 Big Marsh Conservation Area	Marshlands	Hiking, nature study	C	Conservation zoning	CA	
4 Big Woods Conservation Area	Woodlands	Hiking, nature study	C	Conservation zoning	CA	
5 Bohemia River Activity Center	Multi-purpose recreation	Boating, fishing, picnicking, hiking, limited sports	CP	Provide land and facilities for water-oriented recreation activities	AC	
6 Bull Mountain Wilderness Area	Deciduous forest 150' above surrounding land	Sightseeing (excellent view upper Chesapeake Bay)	S, C	Acquire development rights or easements	CA	
7 C&D Canal	Water	Hunting, fishing, boating, hiking	F	Continue maintenance of canal	LU	*
8 Canal Activity Center	Multi-purpose recreation	Fishing, hunting, limited sports, picnicking	F, S	Develop an intensive recreation area	AC	*
9 Chester River Estuary (Upper End)	High scenic value, most outstanding feeding grounds for migratory Canadian geese	Hiking, birdwatching, sightseeing, limited picnicking, fishing	C	Conservation zoning	CA	*
10 Chester River Limited Use Area (North Bank Chester River, NNE of Chestertown)	River-oriented, limited recreation uses	Fishing, hiking, boating	S, C	Acquire easements or provide for open land through conservation zoning	LU	*
11 Chester River Shoreline Conservation Area	River shoreline	Fishing, hiking, birdwatching, limited picnicking	C	Conservation zoning or acquire easements	CA	*
12 Choptank Conservation Area	Natural stream valley	Fishing & hiking	C	Flood plain & conservation zoning	CA	
13 Choptank Limited Use Area	Waterfront	Fishing, limited camping, hiking, nature study	C	Acquire development rights & develop limited facilities	LU	*
14 Choptank River Conservation Area	Waterfront	Fishing, hunting, nature study	C	Conservation zoning	CA	*
15 Choptank River Limited Use Area	Waterfront	Fishing & hiking, hunting	C	Acquire easements, conservation zoning	LU	*
16 Choptank River Marshes	Outstanding wildlife habitat	Hunting, fishing, hiking, nature study	S, C	Acquire easements, conservation zoning	CA	
17 Conowingo Barrens	Unproductive soils, gnarled or twisted oaks & pines	Hiking, hunting, nature study	C	Acquire development rights or easements, use conservation zoning	CA	
18 Craigtown Recreation Area and/or Bainbridge training center	Intensive recreation uses	Fishing, hiking, picnicking, nature study, Athletics	S, C	Acquire land through fee simple Transfer and develop	AC	
19 Deep Landing Limited Use Area	Limited recreation uses	Fishing, swimming, hiking, boating, picnicking	C	Acquire land thru fee simple for concentrated Node of limited recreation uses	LU	
20 East Bank — Susquehanna	River-oriented recreation uses	Fishing, hiking, boating, picnicking	S, C	Acquire development rights or easements at strategic locations, use conservation zoning	LU	*
21 Eastern Neck Island Wildlife Refuge	Wildlife area	Fishing, birdwatching, hiking, nature study	F	Continue management policies	CA	
22 East Fork Creek Stream	Natural stream valley	Hiking, fishing	C	Conservation zoning	CA	
23 East Fork Creek Tributary	Natural stream valley	Hiking, fishing, nature study	C	Conservation zoning	CA	
24 Easton Talbot Terrace Scarp	Unique natural area, geologic phenomenon	Hiking, geologic research	C	Acquire easements, conservation zoning	CA	
25 Elk Neck Limited Use Area	Limited recreation uses	Hiking, Sightseeing	S	Connect existing State-owned areas by acquiring development rights or easements	LU	
26 Elk Neck State Forest	Large wooded area Forest management	Hunting, fishing, hiking, nature study, Forestry	S	Continue management practices, provide limited recreation facilities in predominant wilderness area, prepare management plan	LU, CA	
27 Elk Neck State Park	Multi-purpose recreation	Hiking, swimming, boating, fishing, picnicking, camping	S	Provide additional recreation facilities	AC	*
28 Elkton Activity Center	Multi-purpose recreation	Boating, fishing, picnicking, hiking	M	Develop recreation facilities with marina as focal point	AC	
29 Elkton Wildlife Area	Natural wildlife area	Birdwatching, hiking	C, M	Preserve area for wildlife	CA	
30 Fairlee Point Activity Center	Multi-purpose recreation area Bay oriented	Boating, fishing, hiking, camping, swimming	C, P	Acquire land through fee simple & develop	AC	
31 Faulkner Branch — Hope Creek	Natural stream	Fishing & hiking	C	Conservation & flood plain zoning	CA	
32 Forest Preserve	Woodlands	Hiking, nature study	C	Conservation zoning	CA	
32(a) Fair Hill Recreation Area	Natural stream valley and recreation area	Hunting, fishing, hiking, forestry, swimming, nature study	S, C	Acquire through fee simple	AC, LU	

UPPER EASTERN SHORE RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
33 Frazer's Lake	Fresh water lake with abundance of fish	Fishing, picnicking	C	Preserve lake thru fee simple acquisition or acquisition of development rights	LU	
34 Freeman Creek Conservation Area	Natural stream valley	Fishing, hiking, hunting	C	Conservation zoning	CA	
35 Garland Lake	Pond	Fishing	C	Preserve from land use encroachment thru fee simple acquisition or acquisition of develop. rights	LU	
36 Garrett Island	Granite subsurface, not susceptible to erosion	Possible sightseeing, fishing (excellent vantage point upstream)	S, C	Acquire & preserve	CA	
37 Georgetown/Fredericktown Activity Center	Multi-purpose water-oriented recreation area	Fishing, boating, picnicking	C, P	Continue & expand thru cooperative county & private efforts	AC	
38 Gilpin Point Limited Use Area	Waterfront	Fishing, limited camping, hiking, nature study	C	Acquire development rights & develop limited facilities	LU	
39 Green Point County Park	Multi-purpose recreation area. - Chesapeake Bay-oriented	Sports, hiking, picnicking	C	Acquire land through fee simple & develop	AC	
40 Hambleton Island	Island, highly scenic area	Sightseeing, fishing	C	Acquire easements, conservation zoning	CA	
41 Idylwild Wildlife Demonstration Area	Wildlife area	Birdwatching, hiking, nature study	S	Expand & maintain management practices	CA	
42 Kent Island Conservation Area	Waterfront, limited recreation use	Hiking, nature study, fishing	C	Conservation zoning, or acquire easements; preserve shoreline	LU	*
43 Kent Island Eastern Bay Conservation Area	Waterfront	Fishing, hiking, crabbing	S, C	Acquire easements or develop rights at strategic locations for public access, conservation zoning	LU	*
44 Kent Narrows Activity Center	Waterfront recreation area	Fishing, crabbing, boating, picnicking	S, C	Acquire land in fee simple & develop for recreation area	AC	*
46 Kings Creek Conservation Area	Natural stream valley	Fishing & hiking	S, C	Acquire land in fee simple for recreation area	LU	*
47 Langford Talbot Terrace Scarp	Unique natural area, geologic phenomenon	Geologic research, hiking	C	Conservation & flood plain zoning	CA	
48 Linchester Pond	Pond	Fishing	C	Preserve from land use encroachment thru fee simple acquisition or acquisition of develop. rights.	LU	
49 Little Elk Creek River	Meandering stream valley	Fishing, hiking	F	Develop in accordance with SCS 566 Plans	CA, LU	*
50 Lloyd Creek Conservation Area	Natural stream valley	Fishing, hiking, hunting	C	Conservation zoning	CA	
51 Love Point Recreation Area	Limited recreation uses	Boating, swimming, fishing, limited picnicking	S, C	Acquire land in fee simple & develop for recreation area	LU	*
52 Martinak State Park	Multi-purpose recreation area	Camping, fishing, hiking, picnicking	S	Provide additional recreation facilities	AC	*
53 Mason Branch — Long Marsh Ditch	Marshlands	Boating, swimming	C	Conservation & flood plain zoning	CA	
54 Miles Creek Conservation Area	Natural Stream Valley	Hunting, birdwatching	C	Conservation & flood plain zoning	CA	
55 Miles River Shoreline Conservation area	Waterfront	Fishing & hiking	C	Acquire easements, conservation zoning	CA	
56 Miles River/Tred Avon River Conservation Area	Waterfront	Fishing, hiking, nature study	C	Conservation zoning	CA	
57 Mill Creek Bird Sanctuary	Oak-pine forest, outstanding bird sanctuary	Fishing, nature study	C	Conservation zoning	CA	
58 Millington Wildlife Refuge	Wildlife area	Fishing, birdwatching, hiking, nature study	S	Expand & preserve area for wildlife	CA	*
59 Mills Branch Conservation Area	Natural stream valley	Fishing & hiking	C	Conservation zoning	CA	
60 Morgan Creek Conservation Area	Natural stream valley	Fishing & hiking	C	Conservation zoning	CA	
61 Mud Mill Pond	Pond	Fishing	C	Preserve from land use encroachment thru fee simple acquisition or acquisition of development rights	LU	
62 Napley Green/Ringgold Point	Beautiful peninsular tract, feeding grounds for migratory Canadian geese	Hiking, birdwatching	C	Conservation zoning	CA	
63 Northeast River Activity Center	Intensive recreation uses	Boating, fishing, swimming, picnicking, hiking	S, C	Acquire land through fee simple & county develop	AC	
64 Octoraro Creek Valley	Deeply entrenched meandering gorge	Fishing, hiking, hunting	C	Conservation zoning	LU	
65 Old Mill Stream Branch Limited Recreation Area	Natural stream valley	Hiking, fishing, limited camping, picnicking	C	Implement plans previously developed for the area	LU	
66 Oxford Conservation Area	Waterfront	Fishing, nature study, limited picnicking	C	Conservation zoning	CA	
67 Prospect Bay Activity Center	Waterfront recreation area	Fishing, crabbing, boating picnicking	S, C	Acquire land in fee simple & develop for recreation area	AC	*
68 Queenstown Talbot Terrace Scarp	Unique natural area, geologic phenomenon	Hiking, geologic research	C	Conservation zoning or acquire easements	CA	
69 Remington Farms	Wildlife management, demonstration area	Hiking, birdwatching	P	Preserve area conservation zoning	CA	
70 Rock Hall Activity Center	Multi-Purpose Recreation	Boating, fishing, camping, picnicking, hiking, geologic research	C, P	Acquire land through fee simple & develop	AC	
71 Sandy Bottom Talbot Terrace Scarp	Unique natural area, geologic phenomenon	Hiking, geologic research	C	Conservation zoning	CA	
72 Sassafas	Multi-pupose Recreation	Boating, fishing, camping, picnicking, nature interpretation	S	Prepare master plan acquire land & develop state park facilities	AC	
73 Sassafas & Elk River Conservation Area	River shoreline preservation	Fishing, hiking, hunting, boating	C	Conservation zoning	CA	
74 Seth Demonstration Forest	Woodlands - Forest Management	Hiking, nature study	S	Continue management practices	CA	
75 Smithville Community Lake	Lake	Fishing, boating	C	Preserve lake from land use encroachment	LU	
76 Still Pond — Chesapeake Bay Area	Chesapeake Bay	Fishing, hiking, hunting, camping, boating, picnicking, swimming	C	Acquire development rights or easements & provide limited recreation facilities	LU	
77 Sullivan & Tull Branch Conservation Area	Natural stream valley	Fishing & hiking	C	Conservation & flood plain zoning	CA	
78 Susquehanna Flats	Feeding grounds for migratory waterfowl & fish	Birdwatching, fishing, hiking	F	Preserve as wildlife refuge	CA	*
79 Tilghman Island	Limited recreation uses	Fishing, hiking, sightseeing, limited picnicking	S, C	Preserve open character of Island through conservation zoning; at strategic locations, acquire development rights or easements to waterfront for limited recreation use	LU	*
80 Tolchester Beach	Limited recreation uses	Boating, fishing, camping, swimming, sightseeing, amusements	C, P	Provide additional recreation facilities through cooperation between county & private enterprise	AC	

UPPER EASTERN SHORE RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
81 Tred Avon Estuary	Waterfront	Sightseeing, fishing	P	Maintain attractiveness of area through stringent zoning control	LU	
82 Tuckahoe Creek Shoreline	High scenic area frequented by many forms of wildlife	Sightseeing, hiking, nature study hunting, fishing	S, C	Acquire development rights or easements to preserve environment	CA	*
83 Tuckahoe Creek Stream Valley	Limited recreation use	Hunting, hiking, fishing, birdwatching	S	Acquire in fee simple or acquire development rights or easements	LU	*
84 Tuckahoe State Park	Multi-purpose recreation area	Hiking, picnicking, camping, fishing, swimming, nature interpretation, recreation	S	Acquire land & develop recreation facilities	AC	*
85 Turner Creek Conservation Area	Natural stream valley	Fishing, hiking, hunting	C	Conservation zoning	CA	
86 Unicorn Community Lake	Limited recreation uses	Fishing, boating, limited picnicking	C	Preserve lake from land use encroachment	LU	
87 Urieville Fishing Lake	Limited recreation uses	Fishing, picnicking	C	Preserve lake & prohibit land use encroachment	LU	
88 Welch's Point Activity Center	Multi-purpose recreation	Boating, fishing, camping, picnicking, Nature interpretation	C	Prepare masterplan acquisition of land Develop state park facilities	AC	
89 Woodland Creek Conservation Area	Natural stream valley	Fishing, hiking, hunting	C	Conservation zoning	CA	
90 Worton County Park	Multi-purpose recreation area	Hiking, picnicking, sports	C	Acquire land through fee simple & develop	AC	
91 Wye House & Plantation	Historic, scenic	Sightseeing	P	Maintain area	LU	
92 Wye Island Conservation & Recreation Area	Island	Fishing, hiking, camping, picnicking	S	Acquire land through fee simple for limited recreation use area	LU, CA	*
93 Wye Oak State Park	Historic	Sightseeing	S	Maintain management policies	LU	



LOWER EASTERN SHORE REGION

REGIONAL ORIENTATION

The Lower Eastern Shore Region is predominantly rural. The natural environment is characterized by flat and gently rolling terrain, woodlands, extensive fresh water rivers, bays and ocean shoreline with tidewater bays and estuaries. Vast wetland areas, particularly along the waterways of Dorchester, Somerset and to some extent Worcester Counties, provide unique habitats for nesting, wintering, and migrating waterfowl, and for other wildlife and aquatic life. Two of the Region's greatest attractions are Worcester County's Ocean City and Assateague Island, which are Maryland's only Atlantic coastal areas. Millions of visitors are attracted annually to the shore.

The Chesapeake Bay, which borders the region on the west, the Pocomoke River, one of the State's officially designated scenic rivers, and the Big Annemessex, the Manokin, the Wicomico, the Nanticoke and the Choptank Rivers that penetrate into the region are outstanding scenic attractions. They also offer fishing, boating, hunting and other water-oriented recreation potential and particularly unique ecological areas which provide outstanding aquatic and wildlife habitats.

Although resident population growth is relatively slow and constant, development pressures for seasonal homes are evident in the Region, particularly along tidal and coastal shoreline areas. The drainage of wetlands for agricultural purposes is a significant land use change in the Region.

Although there are nearly 57,000 acres of publicly-owned outdoor recreation and open space areas on the Lower Eastern Shore, over 90 percent of this land is in State Forests and wildlife management areas like Blackwater National Wildlife Refuge, which has one of the greatest varieties of waterfowl and bird species in the United States. Since recreation use is restricted in these areas, Ocean City and the major State Parks including Assateague, Milburn Landing and Shad Landing and, to a lesser extent, Janes Island, are the focal points of state-developed recreation activity on the Lower Eastern Shore.

Resident recreation demands are increasing, but visitor demands will continue to make the most dramatic impact on the Lower Eastern Shore. The Region's natural resources are ideally suited to accommodate recreation demand, especially along the seashore and waterways. The most significant recreation activities are swimming, driving, sightseeing, fishing, picnicking, walking, boating and hunting. Recreation facility development should be oriented to meet the demand for these popular activities.

Special emphasis must be given to the potential of shoreline areas for open space and outdoor recreation. The entire beach area from Ocean City northward to the State line should be controlled by the city through the cooperative efforts of State, County and city governments. The land along the Assawoman Bay and Sinepuxent, which is the gateway to the seashore areas, and the remainder of the shoreline along the

Chincoteague Bay have scenic and unique natural qualities, indicating the need for a detailed land use and environmental preservation plan for the entire length of the lands fronting on these important bodies of water.

The entire length of the Pocomoke River from the Big Cypress Swamp at the Delaware Line south to the Chesapeake Bay, including the important Dividing Creek and Nassawango Creek tributaries, must be preserved to protect wildlife, aquatic life and water resources in the area. The Scenic Rivers Implementation Program being developed by the Maryland Department of Natural Resources will provide preservation and development guidelines for use along this officially designated Scenic River.

Land located along the Tangier Sound, the Chesapeake Bay and the Region's five major rivers must be emphasized; these resources have great value especially to watermen and fishermen. One of the most significant open space and recreation corridors follows the Nanticoke River to Marshyhope Creek and then into Delaware. Access to the tidewater portions of the tributaries of these rivers should be improved because of their relatively high water quality.

Preservation of the Region's vast wetlands should be stressed in order to maintain their ecological importance and to provide hunting and fishing opportunities. The Region's other great hunting opportunities on privately-owned land should be realized by protecting the property of private owners while allowing controlled hunting. Emphasis should also be given to developing a scenic road and trail system, with appropriate information and rest centers, that will fulfill demand requirements and link these corridors of activity. Nodes of recreation activity are along the Region's intricate system of waterways and along the shoreline of major water bodies. Because of the delicate ecology in some of these areas and the physiographic constraints on development, particularly detailed site analysis and sensitive site planning and development are essential.

Local emphasis should be directed toward further development of school/park recreation complexes to maximize County and municipal recreation opportunities, fiscal resources, and physical facilities. Community-wide and county-wide facilities should be acquired and developed to supplement the school/park system. Where possible, these facilities should be along the tributaries outlined in the Plan. In addition, the acquisition and development of public access points to the prime resource — water — should be continued with state cooperation. Much of the preservation emphasis outlined in the Plan will have to be undertaken at a local level through regulatory measures such as conservation and flood plain zoning and techniques other than fee simple acquisition.

Private enterprise has always played a key role in providing recreation and tourism facilities, particularly campsites, marinas, and vacation accommodations. These activities should be encouraged under careful guidance to keep them in harmony with the natural resources that make the Lower Eastern Shore so desirable. These facilities should also be encouraged to develop and locate in conjunction with public recreational activities where revenue-producing facilities are required.

The open space plan is but one element of a rational land development policy. Recommendations relative to open space areas within the Lower Eastern Shore Region are not designed to preclude development proposals for other activities essential for the survival of the region. They are recommended as a means of promoting the natural resources of the region in a manner which will best develop and enhance the area's environmental and economic potential. Because of the Lower Shore's abundance and variety of natural features in an undeveloped state, enhancement of the region's natural advantages presents a unique potential for the expeditious improvement of the area's economy.

"Beauty is its own excuse for being."
Emerson



SUMMARY OF REGIONAL DEMANDS & REQUIREMENTS

Following is a ranking of activities for which a 1970 peak season demand of one-half million or more occasions was calculated for the Lower Eastern Shore, with the calculated annual demand for 1970. Changes in ranking and magnitude of activities between 1970 and 1990 are useful in continuing county and regional recreation planning.

Table 26					
PEAK SEASON & ANNUAL DEMAND RANKED BY ACTIVITY—1970, 1990 Lower Eastern Shore					
Rank	Activity	1970 (millions of occasions)		1990 (millions of occasions)	
		Peak Season	Annual	Peak Season	Annual
1	Swimming Beach	5.3	6.8	11.0	14.2
2	Driving for Pleasure	2.5	9.1	4.1	15.2
3	Sightseeing	2.2	5.6	4.1	10.5
4	Fishing	1.3	2.4	1.9	3.5
5	Picnicking	1.3	4.0	2.2	7.0
6	Walking for Pleasure	1.0	3.5	1.5	5.8
7	Boating	0.9	1.7	1.9	3.5
8	Hunting	0.7	1.3	1.0	2.0
9	Playing Outdoor Sports	0.7	2.2	1.0	3.1
10	Camping	0.5	1.0	1.1	2.2
11	Water Skiing	0.5	0.7	1.4	1.9

By 1990, this list would grow to include swimming pools.

TABLE 27
SUMMARY — DEMAND, LAND AND FACILITIES 1970, 1990 — LOWER EASTERN SHORE

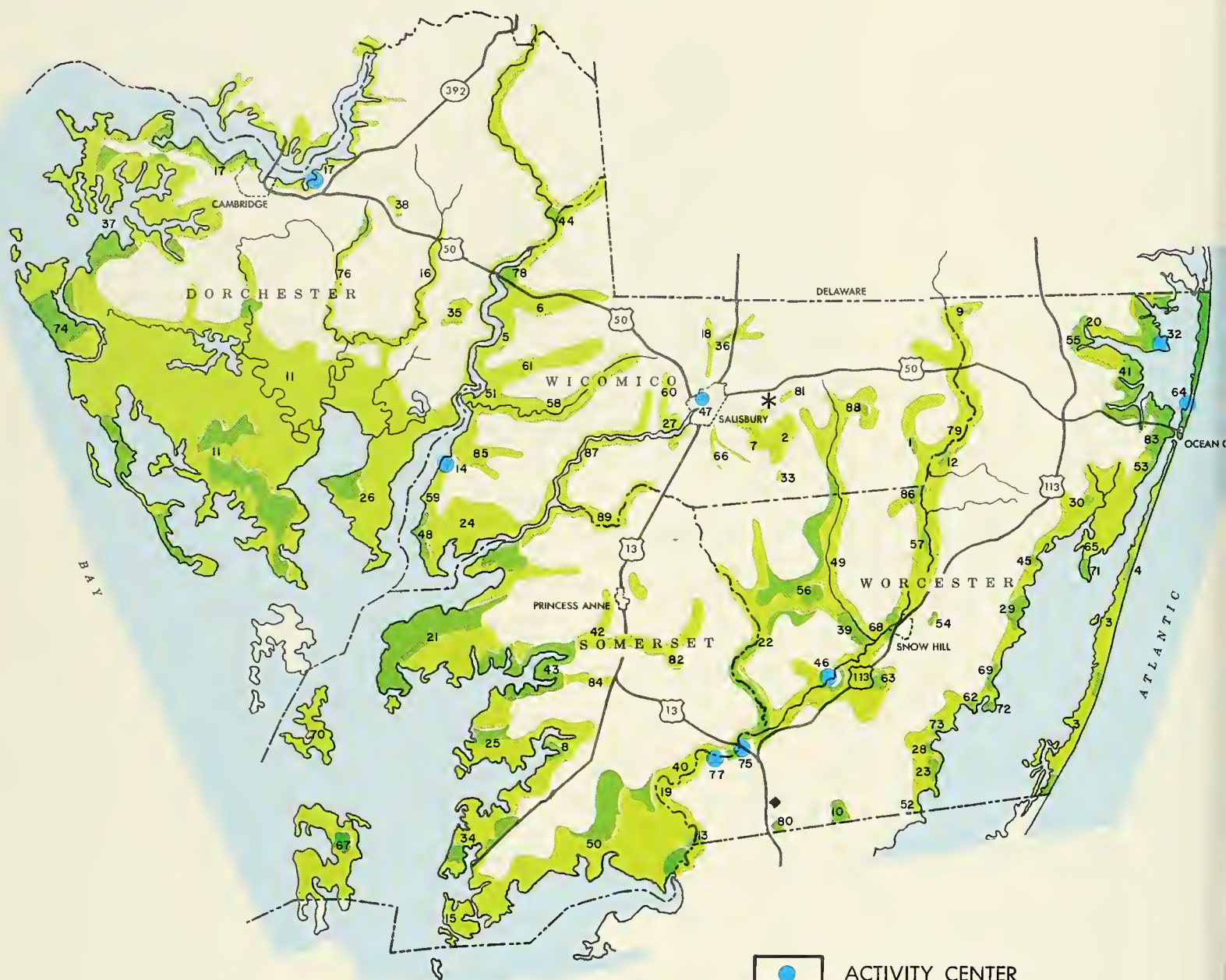
Activity	Annual Demand* (# of occasions)		Total Land and Facility Requirements 1970		1990	
	1970	1990		Deficit (Surplus)		Deficit (Surplus)
Swimming Beach	6.8	14.2	547 acres	460	1,138 acres	1,051
Driving for Pleasure	9.1	15.2	2607 acres 207 miles	**	4472 acres 344 miles	**
Sightseeing	5.6	10.5	92 acres	**	172 acres	**
Fishing	2.4	3.5	183 miles	180	343 miles	340
Walking for Pleasure	3.5	5.8	326 acres	**	473 acres	**
Hunting	1.3	2.0	142 acres	(851)	231 acres	(704)
Playing Outdoor Sports	2.2	3.1	142 miles	136,305 acres	201,265 acres	155,654
Swimming Pool	0.4	0.7	398 acres	(476)	576 acres	(298)
Water Skiing	0.7	1.9	5 acres	(19)	9 acres	(15)
Horseback Riding	0.3	0.6	24,922 acres	**	65,434 acres	**
Hiking	0.2	0.5	504 acres	**	985 acres	**
Ice Skating	0.2	0.2	108 miles	197	197 miles	**
Picnicking	4.0	7.0	8890 acres	1,771	18,985 acres	3,790
Boating	1.7	3.5	15 acres	12	29 acres	26
Camping	1.0	2.2	644 acres	603	1,111 acres	1,070
Snow Skiing	0	0	6,440 tables	6,316	11,110 tables	10,986
Attending Outdoor Cultural Activities	0.006	0.1	19,537 acres	19,474	40,566 acres	40,503
Attending Outdoor Sports	0.4	0.6	7,815 slips	7,037	16,226 slips	15,448
Bicycling	0.1	0.2	454 acres	(424)	1,012 acres	134
Nature Walks	0.3	0.5	3,178 sites	2,510	7,084 sites	6,416
Sledding	0.2	0.2	0 ac. develop.	**	0 ac. develop.	**

* Millions of Occasions
** Information not available for determining deficits
() Amount of land and facilities exceeding demand requirements

COMPREHENSIVE OUTDOOR RECREATION AND OPEN SPACE PLAN

Lower Eastern Shore






CHESAPEAKE



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SCALE IN MILES

PLANNING CONSULTANT — URBAN RESEARCH
& DEVELOPMENT CORPORATION, Bethlehem, Pa.

-  ACTIVITY CENTER
-  LIMITED USE AREA
-  CONSERVATION AREA
-  INFORMATION CENTER
-  MAJOR REST AREA

Note:
Numbers on Plan Map correspond with the Lower Eastern Shore's Recommendations beginning on page 87.

DETAILED REGIONAL RECOMMENDATIONS

The following list, which is number coded to the accompanying Regional Map, elaborates upon the characteristics of the recommended open space and recreation areas for the Lower Eastern Shore Region. The major orientation of each recommended area, suggested compatible recreation activities, potential participants and possible actions for carrying out each recommended open space and recreation area are described. If an area should be given particular emphasis in future acquisition of development activities, it is designated as an Area of Emphasis. The accompanying list serves as a guideline for decision making and provides a basis for further dialogue between the State and the jurisdictions within the Planning Region in further refining recreation and open space recommendations.

POTENTIAL PARTICIPANTS

F - Federal
S - State
C - County
M - Municipal
Q - Quasi Public
P - Private

PLAN CATEGORY

AC - Activity Center
LU - Limited Use
CA - Conservation

LOWER EASTERN SHORE REGION RECOMMENDATIONS

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
1 Adkins Pond & Run Recreation Area	Adkins Pond & Run	Picnic, fishing, camping, nature study and hiking	C	Conservation zoning, scenic easements & selected acquisition by local authorities	LU, CA	
2 Airport Conservation Area	Walston Beach, Woods and Natural Area	Picnic, nature study, hiking and trails	C, M	Acquisition & development	CA	
3 Assateague Island	Atlantic Ocean & Chincoteague Bay	Nature study, swimming, fishing, hiking	F	Continuing maintenance	CA	*
4 Assateague State Park	Atlantic Ocean	Camping, swimming & picnicking, nature interpretation, shore fishing	S	Continued maintenance & operation by state & protection & preservation of natural dune areas	LU	
5 Athol Conservation Area	Nanticoke River	Hiking and Fishing	C	Acquire development rights or easements or use conservation zoning	CA	
6 Barren Creek Conservation Area	Barren Creek	Fishing and picnicking	C	Acquire development rights or easements or use conservation zoning	CA	
7 Beaverdam Creek, Schumaker & Parker Pond Conservation Area	Beaverdam Creek Pond and tributaries	Hiking trails, picnic and nature study	C, M	Acquisition & development	CA	
8 Big Annemessex Conservation Limited Recreation Area	Big Annemessex River and marshes	Hiking, fishing, boating, limited picnicking, nature study	C	Protect shoreline through acquisition of development rights or easements. Use conservation zoning	LU	
9 Big Cypress Swamp	Upper Pocomoke River and Cypress Swamp	Wilderness camping, fishing, hunting & hiking	S, C	Conservation zoning-zoning easements acquisition & development by State & local authorities	CA	*
10 Big Millpond	Big Millpond	Fishing, camping, picnicking, nature study and hiking	C	Conservation zoning, partial acquisition & development	LU	
11 Blackwater National Wildlife Refuge	Lower Dorchester Coastal marshes	Fishing, hunting, nature study and conservation interpretation, wildlife study	F, S, C	Conservation zoning by local authorities and continued acquisition by Federal Government. State acquire land in selected areas for access to water	CA	
12 Burbage Crossing Park	Pocomoke River	Boating, fishing, camping, picnicking, and nature trails	S, C	Acquisition & development in accordance with Scenic Rivers Program	LU	
13 Cedar Hill Landing	Pocomoke River	Boating, fishing, picnicking, camping & nature trails	C	Expansion of existing public landing & adjacent recreation area in accordance with Scenic Rivers Program	LU	
14 Cedar Hill State Park	Nanticoke River	Camping, Boating, Swimming, Picnicking	S	Prepare master plan, acquire fee, simple Rights to land - develop recreation facilities	AC	
15 Cedar Island Wildlife Management Area	Tangier & Pocomoke Sound	Fishing, hunting, wilderness camping, hiking, boating, and conservation areas		Conservation zoning & preservation & selected acquisition and preservation	CA	
16 Chicamacomico River	Chicamacomico River	Fishing, picnic, boating, and conservation	C	Conservation zoning and selected acquisition and development	CA	
17 Choptank River	Choptank River & tributaries	Fishing, picnics, camping, nature study, hiking, boating and conservation.	SC	Preservation of Conservation areas by local authorities. Acquisition & development of strategic limited use recreation areas. Protect shoreline	AC, LU	
18 Connelly Mill Creek Conservation Area	Connelly Mill Creek Naylor's Pond & Johnson Pond	Picnic, fishing, nature study	C, M	Acquisition & development	CA	
19 Cypress Swamp & Lower Pocomoke	Cypress Swamp & Pocomoke River	Boating, fishing, hunting and conservation	S, C	Conservation zoning by authorities & development of selected areas by state authorities	CA	
20 Daye Landing	St. Martin River and Turville Creek	Boating, fishing & picnicking	C	Acquisition & development by local authorities	LU	
21 Deal Island Wildlife Management Area	Deal Island, Dams Quarters, Monie Bay Tangier Sound & Monokin River Bay	Fishing, nature study, hunting, wilderness camping, hiking	S, C	Conservation zoning & preservation by local authorities and selected acquisition, and development by state authorities	LU, CA	
22 Dividing Creek	Dividing Creek	Fishing, camping, picnic	S, C	Acquisition & development in accordance with Scenic Rivers Program	LU, CA	*
23 E. A. Vaughn	Chincoteague Bay	Boating, fishing, swimming, picnic, camping, nature study	C	Expansion of existing wild life management area and development of recreation facilities	LU, CA	
24 Ellis Bay Wildlife Management Area	Wicomico River Marshes & Ellis Bay	Hunting, fishing, hiking, picnicking, and camping	S, C	Expansion of Ellis Bay Wildlife management area by conservation zoning along Wicomico River & acquisition by State	LU, CA	

LOWER EASTERN SHORE REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
25 Fairmont Wildlife Management Area	Tangier Sound, Manokin & Big Annemessex Bays	Fishing, hunting, wilderness camping, hiking, boating, limited recreation & conservation areas	S, C	Conservation zoning & Preservation & selected acquisition & development	LU, CA	
26 Fishing Bay Wildlife Management Area & Savannah Lake	Fishing Bay, Nanticoke River & Savannah Lake	Fishing, hunting, nature study, boating & conservation area	F, S, C	Conservation zoning by local authorities & selected acquisition & development by State & Federal authorities	CA	
27 Fruitland, Marshall & Sharps Point Conservation Area	Wicomico River	Fishing, boating, hiking, picnic, nature study	C	Acquisition and development	CA	
28 George Island Landing	Chincoteague Bay	Boating, fishing & picnicking	S	Acquisition & development in conjunction with E.A. Vaughn Wildlife Management	LU	
29 Harman's Landing	Chincoteague Bay	Boating, fishing & picnicking	C	Expansion & development of existing boat launching area	LU	
30 Hayes Landing	Chincoteague Bay	Boating, fishing & picnicking	C	Expansion & development of existing boat launching area	LU	
31 Higgins Pond Area	Higgins Pond	Fishing, picnic, camping, nature study, hiking and conservation	C	Preservation of Pond and adjacent area by local authorities through acquisition or conservation zoning	LU	
32 Isle of Wright	Assawoman Bay, Isle of Wright Bay & St. Martin River	A variety of waterfront activities, including boating, swimming and picnicking, camping and nature trails	S	Acquisition and development	AC, LU	*
33 Johnson Wildlife Refuge	Forests	Wildlife, hiking	C	Continue maintenance and operation	CA	
34 Janes Island Recreation & Conservation Area	Janes Island & Adjacent wetlands	Boating, fishing, hunting, camping, nature study & conservation areas	C, S	Conservation zoning by authorities & development of selected areas by State authorities	LU, CA	*
35 LeCompte Wildlife Refuge	Mixed hardwood & softwood forests	Preservation of Bryant Fox squirrel	S	Expand	CA	
36 Leonard Pond Run	Leonard Pond Run	Fishing, hiking, picnic, nature study	C, M	Acquisition & development	LU	
37 Little Choptank River and Fishing Creek	Little Choptank River, Fishing Creek and tributaries	Fishing, picnic, camping, nature study, hiking, boating and conservation	S, C	Preservation of conservation areas by local authorities acquisition & development of strategic limited use recreation areas. Protect shoreline	LU	
38 Linkwood Wildlife	Natural Area	Hiking, nature study, limited picnicking	S	Expand	CA	
39 Lower Nassawango Creek Park	Nassawango Creek and Pocomoke River	Boating, fishing, picnicking, camping, hiking & interpretative center	F, S, M	Conservation easements acquisition & development with state and federal assistance. Include as part of scenic rivers system	LU, CA	*
40 Lower Pocomoke River	Pocomoke River	Boating, fishing, camping	S, C	Conservation zoning by local authority. Acquisition and development of selected areas by state in accordance with Scenic Rivers Program	LU, CA	*
41 Mankin Creek	Mankin Creek & Assawoman Bay	Waterfront activities including boating, swimming, fishing and picnicking, hiking, camping	C	Acquisition & development	LU	
42 Manokin-Kings Creek Conservation Area	Natural Stream Valley	Hiking, fishing, nature study	C	Conservation zoning & acquisition of development rights or easements	CA	
43 Manokin River Conservation & Recreation Area	Manokin River Wetlands and Fairmont Basin	Fishing, boating, marina, camping recreation activity center & conservation areas	S, C	Selected acquisition & development of recreation activity center by state authorities; preservation of wetlands by conservation and preservation of historic sites by local authorities	LU	
44 Marshyhope Creek	Marshyhope Creek	Fishing, picnicking, boating, camping, hiking, nature study	S	Prepare State Park master plan. Acquire land & develop park facilities	LU, CA	
45 Mason Landing	Chincoteague Bay	Boating, fishing & picnicking	C	Expansion & development of existing boat launching area	LU	
46 Milburn Landing State Park	Pocomoke River	Boating, fishing, picnicking, camping, trails & nature study	C	Expands land holdings and develop additional facilities, implement recommendations of Scenic Rivers Programs prepare park master plan	AC, LU, CA	*
47 Municipal Park	Tennis, zoo, bank shelter	Tennis, zoo, bank shelter, horseshoe pits, picnicking, sports, boy scout camporee, nature trails, fishing	M	Continue maintenance and provide additional recreation facilities	AC	
48 Nanticoke Estuary	Nanticoke River	Marina, boating, fishing, picnicking, hiking	S, C	State & County acquisition or conservation zoning	LU	
49 Nassawango Furnace Park	Historic preservation	Interpretative center, picnic and hiking	Q, P	Continue existing preservation & improvements by County Historical Society, potential expansion of adjacent land for related uses	LU	
50 Northern Pocomoke Sound Wetlands Conservation Area	Pocomoke Sound	Fishing, hunting, boating, wilderness recreation & conservation areas	C, P	Conservation zoning & Preservation & selected acquisition & development. Provide access points to water for boating	LU, CA	
51 Nutters Conservation Area	Nanticoke River	Hiking and Fishing	C	Acquire development rights or easements or use conservation zoning	CA	
52 Oak & Sassafras Hammocks	Natural Areas	Hunting and hiking	S, C	Acquire development rights, Conservation Zoning	CA	
53 Ocean City Airport Park	Sinepuxent Bay	Picnic, boating, camping and hiking	C	Acquire and develop	LU	
54 Patty's Branch Forest	Pattys Branch & Forests	Camping, picnic, hiking, nature study & active recreation	C	Acquire and develop	LU, CA	
55 Piney Island	St. Martin's River	Boating, fishing, swimming, picnicking and hiking	F, S, M	Acquire and develop	LU	

LOWER EASTERN SHORE REGION RECOMMENDATIONS (cont'd.)

Area	Major Orientation	Suggested Compatible Activities	Potential Participants	Possible Action	Plan Category	Area of Emphasis
56 Pocomoke State Forest	Pocomoke River & Forest Management	Camping, hunting, picnic, boating, fishing, hiking, and nature study, forestry	S	Prepare Management Plan. Continued maintenance of existing facilities and expansion and development of additional land including Bear Swamp	LU, CA	
57 Porters Crossing Park	Pocomoke River	Boating, fishing, camping, picnicking, swimming & nature trails	S, C	Acquisition and develop in accordance with Scenic Rivers Program	LU	
58 Quantico Creek Conservation Area	Quantico Creek	Hiking & Fishing	C	Acquire development rights or easements or use conservation zoning	CA	
59 Ragged Point Conservation Area	Nanticoke River	Hiking and Fishing	C	Acquire development rights or easements or use conservation zoning	CA	
60 Rockawalking Creek Conservation Area	Rockawalking Creek	Picnic, nature study, hiking	C	Acquire and develop	CA	
61 Rewastico Creek & Pond Conservation Area	Rewastico Creek	Hiking and Fishing	C	Acquire development rights or easements or use conservation zoning	CA	
62 Scotts Landing	Chincoteague Bay	Boating, fishing & picnicking	C	Acquire and develop	LU	
63 Shad Landing State Park	Pocomoke River	Boating, fishing, picnicking, camping trails & wilderness interpretative areas	S	Expand land holdings and develop additional facilities in accordance with Scenic Rivers Program	LU, CA	*
64 Shoreline from Ocean City to Delaware State Line	Ocean Front	Swimming, fishing, sunbathing	S, C, M	Acquire Ocean Front to building setback line and develop protection facilities to eliminate shore erosion	AC	
65 Sinepuxent & Chincoteague Marshes	Marshes and bays	Conservation, recreation use, picnic, nature study, fishing, hunting	C, S	Conservation zoning, acquire easements or development rights	CA	
66 Slob Bridge & Tonytank Creek	Slob Bridge & Tonytank Creek	Picnic, hiking, nature study and recreation areas	C, M	Flood plain and conservation zoning, scenic easements, acquire and develop selected portions.	CA	
67 Smith Island	Chesapeake Bay and Tangier Sound	Boating, swimming, fishing, hiking	P	Protect the ecology of island through prudent zoning	LU, CA	
68 Snow Hill Forest	Pocomoke River	Picnicking & fishing, active recreation activities	C	Acquisition of easements	LU	
69 Snow Hill Landing Park	Chincoteague Bay	Swimming, Boating & fishing	C	Continued management & expansion of public landing	LU	
70 South Marsh Island	Chesapeake Bay and Tangier Sound	Boating, swimming, fishing, hiking	F, S	Protect the ecology of island through prudent zoning	CA	
71 South Point Landing	Sinepuxent Bay	Boating, fishing & picnicking	C	Expand and develop existing boat launching area	LU	
72 Tanhouse Creek Landino	Jones Harbor and Chincoteague Bay	Boating, fishing & picnicking	C	Expand and develop existing boat launching area	LU	
73 Taylor Landing	Chincoteague Bay	Boating, fishing & picnicking	S	Acquire and develop	LU	
74 Taylors Wildlife Management Area	Taylors Island	Fishing, hunting, nature study, hiking and conservation	S	Provide access points to water	CA	
75 Town Branch	Pocomoke River & Pocomoke City	Picnicking, trails, nature study & active recreation	M	Acquire & develop by local authorities in accordance with Scenic Rivers Program	AC	
76 Transquaking River	Transquaking River	Fishing, picnic, boating, and conservation	C	Conservation Zoning and selected acquisition and development	CA	
77 Union Branch	Pocomoke River & Pocomoke City	Boating, fishing, picnicking, camping, and active recreation areas	C	Acquire & develop in accordance with Scenic Rivers Program	AC	
78 Upper Nanticoke River	Nanticoke River	Fishing, picnic, camping, nature study, hiking, boating and conservation	SC	Preservation of conservation areas by local authorities. Acquire & develop strategic limited use recreation areas. Protect shoreline	LU, CA	
79 Upper Pocomoke River and Swamp	Pocomoke River	Conservation, limited recreation use, picnic, nature study, hunting, fishing	S, C	Acquire by fee simple or acquire easements & development rights. Conservation zoning control to guide development in accordance with Scenic Rivers Program	CA	*
80 Virginia Gateway	Woods & streams	Information center & wayside rest, picnicking, camping & hiking	S, C	Acquisition & development with continued preservation of historic Pitts Church	LU	
81 Walston Conservation Area	Beaverdam Creek and Halloway Branch	Picnic, nature study, trails, hiking, fishing	C, M	Acquire & develop	CA	
82 Wellington State Game Refuge	Dublin Swamp Basin	Wildlife observation, nature study, limited picnic	S, C	Expansion of existing wildlife refuge by acquisition by state and local authorities or conservation zoning by local authorities	CA	
83 West Ocean City Landing	Sinepuxent Bay	Boating, fishing & picnicking	C	Expand & develop existing boat launching area	LU	
84 Westover Spring	Westover Spring	Picnicking, nature study, hiking	S	Continued preservation of largest spring by State authorities and expand surrounding land for limited recreation	LU	
85 Wetipquin-Tyaskin Creek Conservation Area	Wetipquin Creek	Fishing & hiking	C	Acquire development rights or easements or use conservation zoning	CA	
86 Whiton Crossing Park	Pocomoke River	Boating, fishing, camping, picnicking and nature trails	S, C	Acquire & develop in accordance with Scenic Rivers Program	LU	
87 Wicomico River Conservation Area	Wicomico River	Fishing and Hunting	C	Acquire development rights or easements or use conservation zoning	CA	
88 Wicomico State Forest	Natural Forest Area - Forest Management	Picnicking, hiking, nature study, camping & hunting, forestry	S	Prepare Management Plan. Expand & develop for limited recreation use	LU, CA	
89 Wicomico Creek	Wicomico Creek	Fishing, picnic, camping, limited use recreation areas and conservation	C	Conservation zoning & selected acquisition and development by local authorities	CA	

*"Quality of the environment, like freedom, must be
protected and achieved anew by each generation."
Laurance S. Rockefeller*



SPECIAL CONSIDERATIONS

This portion of the Comprehensive Outdoor Recreation and Open Space Plan treats specific subject areas that have particular importance to Maryland's open space and recreation system, to the preservation and enhancement of Maryland's environment, and to certain residents. These "special considerations" and the recommendations that grow out of them deal mainly with the needs of urban areas and people who have "special" needs, such as the elderly. Recommendations in this section are a part of the Statewide plan.

URBAN OPEN SPACE & OUTDOOR RECREATION

Over 3.3 million Maryland citizens live in urban areas. They represent 85.6 percent of the State's total population. By 1990, nearly 5.1 million people or 87.2 percent of the State's population are expected to reside in urban areas. If these urban areas are to be desirable places in which to live, work and play, it is important to maintain, create and restore a quality urban environment. Recreation opportunity and open space are essential ingredients of such an environment. The Concept Plan established the need for Maryland to give special consideration to providing recreation opportunities and open space where the people are located; this study elaborates further upon that vitally important State policy.

OPEN SPACE HAS HUMAN VALUE

Open space in urban areas provides recreation opportunities, conserves valuable scenic and natural resources, and gives form to metropolitan communities. In unstructured open space, the individual has a chance to create his own recreation. He can meet challenges, and participate actively in ways denied him in the protected and expensive urban environment. Open space provides a place to relax. Open space also becomes a powerful means of extending the citizen's intellectual and emotional reach by helping him to understand his physical and social environment and how it relates to him.

URBAN RECREATION

Until very recently, a "typical population" with "typical interests" has been assumed in the planning of urban outdoor recreation facilities. As a result, diverse values due to ethnic, economic, age, sex and other differences within the urban population have been largely ignored. But the needs of groups within the population — ethnic minorities, teenagers, single persons and the aged — are indeed "special considerations."

ESSENTIAL INGREDIENTS

Land, facilities, programs, personnel and financial resources are essential in providing recreation, and all are especially limited in urban areas. Demands for expanded recreation programs and facilities, however, increase without regard to the availability of resources to provide them. Recreation officials must devise new, imaginative and creative approaches that will realize the full potential of existing resources.

Land is at a premium in densely populated areas. However, a careful search will often disclose wasted or under-used space. Possible recreation sites include:

- Land above, below or adjacent to utility and highway rights-of-way.
- Land held by governmental agencies or departments, but not utilized.
- Side streets or alleys no longer necessary as passageways.
- Vacant lots or temporarily vacant land awaiting development, such as public urban renewal land.
- Roof tops, especially those of public buildings.

- School grounds and buildings.
- Industrial and institutional lands being held for expansion.

Some unique recreation facilities can be provided through innovative action:

- Portable facilities allow greater utilization of available resources at minimal cost. Such facilities range from portable playground equipment to zoos on wheels.
- Multiple-use facilities are effective in limited space. For example: a swimming pool/recreation complex one-half below grade, with its roof used as a playground.
- Creative open space wherein children and adults build their own equipment from tools and materials made available, can provide great pleasure.
- The addition of lighting at some recreation facilities can extend their use.

New and creative plans for recreation programs include citizen participation in planning programs as well as interdepartmental communication on the governmental level, and can result in well-utilized facilities. To be successful, recreation programs must be what the people want, not what recreation departments believe to be best for them. An educational/recreational nature study with "exhibits" placed in their natural settings in part of an open space area is one example of cooperative resource utilization.



Greater participation in recreation activities by the economically disadvantaged can be promoted by: providing a greater number and variety of free programs in poor areas; establishing subsidies for commercial enterprises in these areas so that the disadvantaged can use the facilities more often; and designating "free" days for special public facilities, e.g., zoos, museums, that usually have admission charges.

Recruitment of qualified professional recreation personnel is a major problem. The low salaries associated with jobs in recreation discourage the pursuit of careers in this field. Volunteers and local residents can often do much, however, raising salaries in the field of recreation may be the only way of encouraging more people to enter it as a profession.

Recreation programs and facilities depend upon the willingness and ability of elected officials to provide adequate financing. In many instances, unfortunately, shaving dollars from the recreation budget has proved an expedient way to reduce overall expenditures.

Park land and recreation facilities have been acquired traditionally through gifts from concerned citizens and groups, interdepartmental transfer of unused land, and direct purchase. The latter has been increasingly difficult in most urban areas where the cost of land is exorbitant. Local governments are looking to State and Federal agencies for the additional financing necessary to meet recreation requirements. In recent years, State financial assistance has increased

in urban areas. Federal programs have been more diverse, with funding through the Land and Water Conservation, Neighborhood Facilities, Open Space Land, Urban Beautification, Model Neighborhoods in Demonstration Cities and Community Action Programs. In the Open Space Land Program, State Funding has been more abundant than Federal. The "Legacy of Parks Program" is the newest one devoted to bringing parks to the people and it is representative of the Federal Government's growing concern for improving the urban environment and meeting the recreation needs of urbanites.

URBAN RECREATION

Maryland has developed a set of statewide, uniform guidelines for the purpose of aiding urban areas in developing open space and outdoor recreation plans and programs:

- Preserve open space and develop compatible recreation facilities.
- Promote physical, social and financial accessibility to all open space and outdoor recreation facilities.
- Provide the widest variety and greatest possible number of open space and outdoor recreation opportunities to serve all interests of the urban population.
- Encourage cooperation between governmental units, private and commercial organizations in promoting joint development of open space and outdoor recreation opportunities.

The State further recommends that the following National Recreation & Park Association standards be considered as additional guidelines in the development of metropolitan open space and outdoor activity centers.



URBAN AND METROPOLITAN PARK AND RECREATION STANDARDS

Classification	Acres/ 1000 People	Size Range	Population Served	Service Area
Playlots	*	2,500 sq. ft. to 1 acre	500-2,500	Sub-neighbor- hood
Vest Pocket Parks	*	2,500 sq. ft. to 1 acre	500-2,500	Sub-neighbor- hood
Neighborhood Parks	2.5	Min. 5 acres up to 20 acres	2,000-10,000	1/4-1/2 mile
District Parks	2.5	20-100 acres	10,000-50,000	1/2-3 miles
Large Urban Parks	5.0	100+ acres	1 for ea. 50,000	Within 1/2 hr. driving time
Regional Parks	20.0	250+ acres	Serves entire population in smaller com- munities, should be distributed throughout larger metro areas	Within 1 hr. driving time

Source: National Recreation and Park Association, **National Park, Recreation and Open Space Standards**.



Playlot — The playlot, normally provided in apartment and other high density areas where space is at a premium, is intended for children up to seven years of age and usually features play apparatus, a paved area, benches, sand areas and landscaping.

Vest Pocket or Mini-Parks — These small parks, usually placed on vacant lots where recreation facilities serve the neighborhood, may feature children's play areas, quiet game areas, landscaping and multi-purpose courts.

Neighborhood Park — These moderately sized parks should adjoin public elementary schools whenever possible. Active and passive recreation areas for children and adults should be complemented by attractive landscaping.

District Park — The District Park should, whenever possible, adjoin junior and senior high schools. While having many of the amenities of the Neighborhood Park, the District Park has facilities which require more space such as tennis courts, swimming pool, multi-purpose courts, community center, and adequate off-street parking.

Large Urban Park — This larger and less formal park is often located near or outside the city limits as an easily accessible retreat from noise and congestion. Wooded areas, water and sloping lands, picnic areas, boating, swimming, nature walks, riding trails and some sports facilities characterize the large urban park.

Regional Park — These large parks are usually within an hour's travel time for the people of a region. Some of these parks may be left natural, and others will have both natural areas and facilities such as campgrounds, picnic areas, nature centers, trails, water areas, golf course, botanical gardens and sometimes sports fields.

PRIVATE RECREATION

The current emphasis on governmental responsibility to provide outdoor recreation opportunities at times overshadows the significant role of private endeavors in this field. Privately operated golf courses, marinas, ski centers, camps and clubhouse facilities, offer many

opportunities for diversified recreational activity that would not be available if government were the sole provider.

Privately-owned recreation facilities also have direct economic benefits for a community in terms of employment, food and lodging income, sales of equipment and services. Public facilities with large attendance can stimulate private business.

THE PRIVATE SECTOR

In recent years, imaginative thinking in the recreation industry has made skydiving a sport, promoted snorkeling and skuba-diving, turned skiing and snowmobiling into family activities, and made owning a boat commonplace. Private swimming pools and country clubs have added to the available outdoor recreation facilities near home, and privately developed resorts and vacation farms have provided recreational facilities of all types.

Private or quasi-public organizations such as nature groups, fish and game clubs, and youth groups have preserved and developed many areas of scenic beauty while providing special facilities for their members. Private wildlife preserves and botanic gardens allow man to enjoy and study nature. Privately funded reconstruction of historically significant areas has preserved interesting elements of the past and created tourist attractions which promote economic growth.

PRIVATE-PUBLIC INTERACTION

A publicly owned area often supplies basic recreation facilities with nearby private businesses existing as separate, but dependent, enterprises. Large attendance at a state park, for example, encourages the growth of private camp grounds, motels, restaurants, craft shops and vacation farms. Entrepreneurs may sponsor special events such as flower festivals, fall foliage tours, or "winter wonderland" weekends, which help to extend the tourist season beyond the traditional summer months.

This public/private interaction may work the opposite way as well. The development of a private wildlife preserve or reconstruction of an



Each person must have elbow room and opportunity for occasional solitude.

historical monument, for example, may create a demand for public foot or bicycle trails leading to the area.

The most direct type of public/private interaction is when goods and services, such as refreshments, are provided through a licensed concession within a publicly-owned and operated outdoor recreation area. Possible concessions include boat rentals, stables for riding, golf and ski-mobile shops, and sightseeing vehicles and tours.

GUIDELINES FOR PUBLIC/PRIVATE EFFORTS

Public agencies should provide basic recreation facilities at a cost low enough that all citizens can participate. Unfortunately, private recreation facilities are unavailable to some because of the cost, membership requirements, difficulty of access, and other factors. The primary concern of government should be to supplement rather than compete with private industry.

Many private recreation enterprises fail for want of good planning and design; much information that would be useful is not available. This is one important area in which more study and technical assistance by the State can aid in the development of private outdoor recreation facilities open to the general public.

Analysis of the private sector's supply of outdoor recreation lands, facilities and programs might reveal a need for changes in State policies and procedures to better enable private enterprise to operate in the field of outdoor recreation. Provisions could be made for: state land to be purchased and resold later to private enterprise for development; the letting of concessions on public lands for the operation or construction of park lodges and other specialized recreational facilities; allowing privately constructed facilities to be leased-back or sold to the government for public operation; and allowing semi-public groups, such as youth organizations, to construct permanent campsites and other similar facilities on public land to be used at certain times by those groups and at other times by the general public. This type of public/private interaction provides necessary outdoor recreation facilities in certain areas while freeing government

funds for State development of facilities elsewhere.

There is also a need for studies of existing local zoning and real estate tax laws to determine how they can be more effective in promoting the development of high quality, privately supplied outdoor recreation. Many ordinances exhibit inconsistent treatment of public and private recreational development by placing heavy restrictions on private recreation development while giving full rein to public recreation development. Standards for development of quality recreation facilities should apply to all facilities, whether publicly or privately developed. Setting equitable standards also eliminates the need for restrictive zoning, thus opening a door to innovative, but high quality, recreation facilities. Judiciously selected tax concessions are another way of stimulating private development.

The Federal government can play a prominent role in supplying both technical and financial aid to private entrepreneurs attempting to establish outdoor recreation facilities. The U. S. Soil Conservation Service, the Farmer Cooperative Service, and the U. S. Forest Service Cooperative State-Federal programs offer technical and educational assistance. Counselors will plan and install income-producing recreation enterprises; and specialists from land grant universities can provide training and consultation for various activities. The Forest Service offers timber-growing information on planting, harvesting and fire protection. In addition, the Water Resources Research Act of 1964 authorizes one million dollars yearly, to 1974, for grants, contracts and matching or other arrangements with private foundations, firms and individuals for research and training in many areas, including recreation.

A relationship between government and private enterprise must provide mutual benefits — public savings and private profits. Our goal must be to develop a creative partnership between government and private enterprise that will achieve the most productive use of all outdoor recreation resources.

SPECIAL RECREATION

All people have a right to enjoy outdoor recreation. Some, however, are unable to make full or even partial use of the outdoor recreation opportunities about them. A special effort must be made to provide these people with the ways and means of participating in the pleasures of outdoor recreation.

Special recreation is concerned with providing outdoor recreation opportunities for special groups of people — the aged, the handicapped, and the institutionalized.

THE AGED

Our fast-moving world too often has no time for the slower-moving senior citizen. But provisions often can be made with relative ease to provide opportunities for them to recreate outdoors. Lawn bowling, "senior softball," and "croquet parks" are examples of semi-active recreation enjoyed by many older people. Short, fairly level, and easily accessible walking and three-wheel cycling trails can provide a pleasant "breath of fresh air." Special programs such as "senior softball" can generally be developed and operated by the seniors themselves with only the playing fields provided by others.

The cooperation of local, state and federal governments with private senior citizens groups is important. In many areas, private groups have begun sponsoring family camping trips which include seniors in the two-or-three-day excursions. Day and weekend bus tours may be organized by "golden age" clubs and subsidized in part by government funds.

Direct funding of outdoor recreation facilities for the aged is often provided by local private and public agencies — United Fund, Community Action Commission, city and county governments. Other funds are available from Federal programs under the Department of Health, Education & Welfare, the Department of Housing & Urban Development, and the Department of Agriculture.

THE HANDICAPPED

In many instances, the handicapped would be able to use existing outdoor recreation facilities modified to include ramps, hand rails, guide ropes, sound signals and other safety features. Examples of special facilities for the handicapped include the expansion of "blind trails" such as found in Patapsco State Park, swimming pools of lesser depth including special equipment for use by the elderly and the handicapped, and specially designed playground equipment.

Private organizations geared to specific populations such as "Golden Age Clubs," the Crippled Children's Society, and the Mental Health Association have led the way in providing outdoor recreation opportunities for their constituents. Private groups should work with government at the local, State and National level to coordinate, develop and fund outdoor recreation programs for these people.

It is beyond the time for government to assume responsibility for providing outdoor recreation opportunities for the elderly and handicapped.

THE INSTITUTIONALIZED

Persons in correctional institutions need increased outdoor recreation opportunities with social and psychological as well as physical benefits. Programs could include softball, volleyball, handball, and similar sports for which equipment is relatively inexpensive, thus allowing acquisition of a greater amount. Consideration should also be given to implementing creative recreation programs with indoor and outdoor opportunities.

RECOMMENDATIONS ON SPECIAL RECREATION

- Public recreation agencies should cooperate with government in assuming responsibility for making recreation opportunities available to the elderly and the handicapped.
- Financial support should be established on a continuing basis through the contributions of public and private agencies.
- Professional help should be utilized, especially in the initial stages of planning and developing recreation services for the elderly and handicapped.

TRAILS

Trails represent a major opportunity to satisfy the increasing demand for outdoor recreation. Walking, hiking and bicycling are within the economic reach of virtually all people.

The provision of trails can best be handled with the combined efforts of the various public and private interests.

The Federal Government should:

- Develop additional trails on Federal lands.
- Permit and encourage the State and its political subdivisions to construct and maintain trail facilities on Federal lands.
- Provide technical guidance and assistance in the planning and development of trail facilities, including the collection and dissemination of data.
- Assist local agencies in obtaining funds to acquire land and to develop trails.

The State should:

- Develop more trails on State-managed lands.
- Encourage cooperative planning and development of trails with local government and private groups.
- Distribute, through a system of priorities, Federal and State grant money for trail acquisition, development, and maintenance by local governments.
- Transmit technical recreation data to local governments for their use in determining needs, construction standards, and operating procedures for trails.
- Provide "noise parks" for off-road recreational vehicles such as snowmobiles, jeeps, minibikes, trail bikes, motorcycles, ATV's, etc.

Local Agencies should:

- Assume the major responsibility for acquisition, planning, development and maintenance of trail systems.
- Pursue an aggressive program of trail development on city and county lands.
- Mobilize youth groups and hiking, riding, and cycling clubs to develop public support for trails.
- Seek technical and financial assistance from State and Federal agencies.
- Mark, maintain and police trails, and regulate their use.
- Publicize the opportunities for trail use via news media and trail guide maps.

Private Groups should:

- Stimulate State and local legislative action to authorize trail development and maintenance.
- Advise public agencies of the needs for trail facilities, and participate in joint planning.



- Assume responsibility for construction and maintenance of designated trails or segments.
- Provide as much financial assistance as possible to help realize joint aims.
- Publicize and encourage trail activities and teach trail manners.

SCENIC ROADS

Driving for pleasure is one of America's most widely and actively engaged in outdoor recreation pursuits. Four out of five families own automobiles and the number of cars owned is increasing faster than the population. The Maryland Outdoor Recreation Demand Study indicates that by 1990, the number of sightseeing and driving for pleasure occasions within the State will increase to over 63 million. This is a 66 percent increase over the 1970 demand of over 25 million occasions.

Scenic roads get people to major recreation areas and provide a recreational atmosphere enroute. Picnic areas, campsites and other facilities along the road provide additional opportunities for recreation.

GUIDELINES FOR CHOOSING A SCENIC ROAD

Not all of the following criteria are applicable in every instance, but they are general guides to identifying existing scenic roadways and to locating new ones:

Accessibility — The road should provide access to, or links between, existing or proposed parks, other public recreation areas, points of scenic, cultural or scientific interest, or major highways.

Adaptability to Development — The roadside should be relatively free of commercial or restrictive developments within a minimum corridor and right-of-way width of 200 feet. Existing developments not in keeping with the desired character of the corridor could be eliminated, by-passed or screened from view.

Compatibility — Location of new roads should be compatible and coordinated with other outdoor recreation, aesthetic and conservation objectives. The route should not disrupt wilderness areas, fish, wildlife, or nature preserves, nor should it impair the maintenance or enjoyment of scenic, geologic, cultural or historic features.

Competing Uses — The requirements of other roadway users should not interfere substantially with use of the road for recreation purposes. Interference is avoided when the volume of other-use traffic is small

enough to be of little concern; or the bulk of other use occurs when little recreation use is being made of the road; or, additional capacity and design features have been or can be built into the road to accommodate the needs and driving patterns of the recreation seekers and other users.

Design and Safety — Roadway design should foster graceful horizontal and vertical alignment, appropriate curves and striking vistas, and should be able to accommodate the anticipated volume of traffic without undue hazard.

Location and Geographic Distribution — The location of a scenic road should contribute to the equal distribution of scenic roads over a wide geographic area. Additional roads should be located where they may serve the needs of the people in population centers for day-use and weekend recreation. Some roads may parallel the approximate alignment of a major interstate or inter-regional route allowing easy access for highway travelers who would use the scenic road occasionally during their journey.

Quality — The scenic, historic, or cultural character of the scenic road corridor should be of high enough quality to merit local, state or national recognition, or should be of sufficient interest to be itself a destination for recreation purposes. It should provide opportunities for the development of complimentary roadside facilities at intervals.

Variety — The road should provide a variety of experiences, such as changes in terrain, landscape and land-use. It should exhibit the natural or cultural landscape peculiar to that area of the State.

A designation should be made to determine the order in which roads should be developed as economics and acquisition allow. Priority should be based on the extent to which a road encompasses the above guidelines, and these additional criteria:

- feasibility and cost of development;
- imminence of approval or improvement at the state or local level;
- popular demand — national, state or local — for the development of a particular scenic corridor;
- location in areas of highest demand for driving for pleasure and sightseeing as determined by the study of Maryland's recreation demand;
- location within the open space framework of the Maryland Outdoor Recreation & Open Space Plan.

SCENIC RIVERS

Technology provides many good things in life, but unplanned and uncontrolled technological encounters with the environment have left us poorer than we began — especially along our waterways where water pollution, dwindling wildlife, unstable ecological systems and biological hazards have been the result.

Maryland has taken action to avoid these consequences. State legislators passed a Scenic Rivers House Bill, 1303, which Governor Marvin Mandel signed into law in April, 1971, to establish a detailed framework for state and local preservation of five major rivers:

- The Patuxent River, Maryland's deepest and longest river.
- The Pocomoke River in Lower Eastern Shore.
- The Severn River, with its urbanized shoreline, that flows past historic Annapolis.
- The Wicomico River and Zekiah Swamp in Southern Maryland.
- The Youghiogheny River in Western Maryland.

The Scenic Rivers Review Board authorized an inventory and designation of scenic rivers by its members and an interdisciplinary Technical Task Force, made up of staff from the State Department of Natural Resources and Department of State Planning, who inventoried and evaluated 77 of the State's rivers. The five chosen as initial components of the Scenic Rivers Program qualified on the basis of three major attributes:

1. Variety of physical features of the river and its adjacent corridor.
2. Biological and water quality of the river and its wildlife.
3. Variety and quality of human use and interest features attractive to man for his active and passive recreation.

Concept plans were prepared for each of the five rivers. The State Department of Natural Resources is preparing more detailed plans for the preservation and control of development along the five officially designated Scenic Rivers. These plans and action programs will be implemented jointly through cooperative Federal, State, county and municipal efforts.

ISLANDS

CONDITIONS AND TRENDS

Maryland has 247 islands, comprising 104,246 acres. This figure, which will be surprisingly high to many persons, indicates an abundant number of resources that have public recreation, scenic wilderness, historic and scientific significance.

Islands face the potential problem of all fragile natural resources: over-development. The Federal Government, through the Department of the Interior, has begun an urgent national effort for island conservation. Actions scarcely noticed on the mainland can completely change an island. This vulnerable characteristic is most significant in the light of the vast popularity of water-based recreation opportunities and the great potential that islands offer for swimming, boating, fishing, camping, hiking, nature study, picnicking and other activities.

More leisure time and the growing desire for periodic seclusion from the urban way of life help explain why more people are seeking the peaceful environment that islands offer. Advances in engineering, bridge construction and water-related transportation including hydrofoils, air cushion boats and helicopters are making islands more accessible. Ten years ago a ferry hauled people from the mainland to Assateague Island. Today, a bridge provides an opportunity for hundreds of thousands of persons to visit and use the Assateague State Park and National Seashore; slightly over one million people visited the Assateague Island State Park in 1970 compared with 219,000 three years earlier. Although improved access to islands

Maryland Planning Regions				
Planning Region	Island	Acres	Percent Developed	Body of Water
WESTERN MARYLAND & FREDERICK	Byrnes Island group	36	None	Potomac River
	Ileater Island group	485	3	Potomac River
	Shepherds Island group	16	None	Potomac River
	Sub-Total	537		
BALTIMORE	Gibson Island group	811	25	Magothy River
	Hart Island	95	None	Chesapeake Bay
	Kent Island group	22,542	10	Chesapeake Bay
	Miller Island	33	None	Chesapeake Bay
	Pleasure Island	26	None	Chesapeake Bay
	Pooles Island	173	2	Chesapeake Bay
	Roberts Island group	99	8	Susquehanna River
	Spesutie Island group	1,526	20	Chesapeake Bay
	Sub-Total	25,305		
SUBURBAN WASHINGTON	Harrison Island group	333	2	Potomac River
	Mason Island group	240	1	Potomac River
	Seiden Island group	464	1	Potomac River
	Sherwin Island group	260	None	Potomac River
	Watkins Island group	779	None	Potomac River
	Sub-Total	2,076		
UPPER EASTERN SHORE	Chase Island	16	None	Chester River
	Dickerson Island	48	None	Choptank River
	Eastern Neck Island	2,304	15	None
	Garrett Island	159	None	Susquehanna River
	Hambleton Island	42	None	Broad Creek
	Poplar Island group	200	1	Eastern Bay
	Tilghman Island group	1,488	18	Chesapeake Bay
	Wye Island	2,112	8	Wye Narrows
	Sub-Total	6,369		
LOWER EASTERN SHORE	Adam Island	142	1	Chesapeake Bay
	Ayer Island Group	54	None	Ayer Creek
	Barren Island	370	1	Chesapeake Bay
	Big Island group	50	None	Pocomoke Sound
	Bloodsworth Island group	4,535	None	Chesapeake Bay
	Cherry Island	14	10	Choptank River
	Deal Island group	2,347	17	Tangier Sound
	Devil Island group	20	None	Assawoman Bay
	Dunnock Island group	256	None	Dunnock Island Creek
	Harpers Island group	146	None	Blackwater River
	Holland Island	143	1	Chesapeake Bay
	Jackson Island group	28	None	Annessex River
	Jericho Island group	754	2	Manokin River
	Lower Hooper Island	736	None	Chesapeake Bay
	Meekins Neck group	4,471	5	Chesapeake Bay
	Middle Hooper Island group	1,686	20	Chesapeake Bay
	Mills Island group	642	1	Chincoteague Bay
	Northeast Island	29	None	Chesapeake Bay
	Pone Island group	446	None	Chesapeake Bay
	Ragged Island group	106	2	Little Choptank River
	Reedy Island group	35	None	Assawoman Bay
	Smith Island group	9,906	4	Chesapeake Bay
	Sheldrake Island	344	None	Chincoteague Bay
	South Hammocks Island group	162	None	Assawoman Bay
	South Marsh Island group	2,884	None	Tangier Sound
	Spring Island group	53	None	Chesapeake Bay
	Sugarloaf Island	224	None	Blackwater River
	Taylor's Island group	8,094	10	Chesapeake Bay
	Tizzard Island group	150	None	Johnson Bay
	Upper Hooper Island	1,044	40	Chesapeake Bay
	Wroten Island	503	3	Henga River
	Sub-Total	40,374		
SOUTHERN MARYLAND	Point Lookout Island group	238	20	Chesapeake Bay
	St. Catherine Island group	69	5	Potomac River
	St. George Island	510	40	St. Mary's River
	Sub-Total	817		
GRAND TOTAL		75,478 acres		

Source: U. S., Department of Interior, Bureau of Outdoor Recreation - Islands.

greatly increases opportunities for recreation, it also presents a danger that applies to all natural areas: overuse can spoil the very things that people reach out for.

Islands that have significant recreation potential unavailable to the general public are listed herein. Each region has islands, but the Lower Eastern Shore and Baltimore Regions collectively account for 87 percent of the land in islands in Maryland. Many islands provide an alternative way to enjoy the Chesapeake Bay and other major water bodies, one reason why islands should be evaluated to determine the feasibility of using them for recreation.

ACTION

Appropriate measures for protection and sensitive development must be determined for all of Maryland's islands, with emphasis on those within an hour's drive of major population centers. Comprehensive planning provides a sound, logical tool. A well-conceived plan will foresee and prevent potential conflicts between man and nature by providing a long-range evaluation of island resources and determining conservation and development policies.

While developing a Comprehensive Plan for each of Maryland's islands is a primary goal, other actions are recommended to provide direction in preserving and developing our islands until a special study is undertaken and a Comprehensive Plan is prepared. Recommended actions are based on the recommendations made by the Department of the Interior's Bureau of Outdoor Recreation in its publication, **Islands of America**.

—Each Federal agency should systematically evaluate possible detrimental effects of its programs on the scenic, historic, ecologic and outdoor recreation qualities of islands.

—Five major State actions are recommended:

- Survey and analyze islands to identify needs for public acquisition of unique island areas to achieve conservation and recreation objectives.
- Consider selective State acquisition to promote island conservation, including underwater areas adjoining islands.
- Adopt and support effective regulations for dredging and filling to preserve the recreational qualities of island environments.
- Insure that the enforcement of water quality standards will permit islands to be used for recreation purposes.
- Acquire or otherwise obtain public access to the shoreline of islands suitable for recreation and conservation purposes.

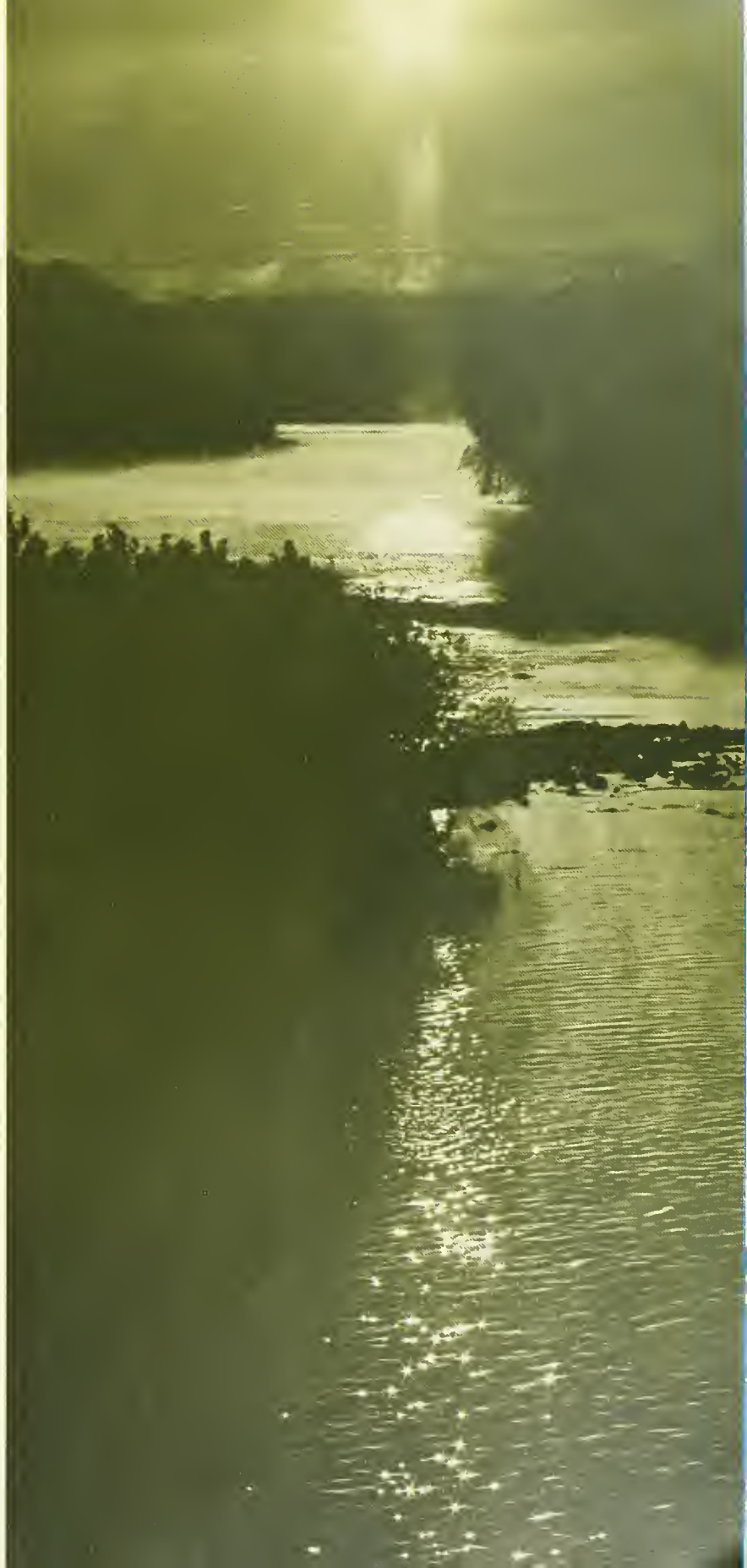
—Maryland's counties and municipalities should consider the following:

- Adopt long-range comprehensive plans and effective zoning and other ordinances to control the use and development of islands.
- Acquire islands or island property for recreation, open space and conservation, with emphasis on providing public access to the shoreline.

Nearly 60 percent of Maryland's islands are privately owned. Maryland recognizes the importance of private capital and initiative for island development in accordance with policies that insure the prudent use and conservation of land.

Private actions should:

- Create non-profit groups to acquire desirable islands, possibly with a permit system to control public use.
- Provide limited public recreation use on privately owned land with government providing tax incentives.
- Donate private islands to public conservation or recreation agencies.



*"I believe a leaf of grass is no less than the journeywork
of the stars"*

Walt Whitman



IMPLEMENTATION

RESPONSIBILITIES

The Comprehensive Outdoor Recreation and Open Space Plan makes far-reaching recommendations. But implementing these proposed improvements is what must be accomplished. Not just by one level of government, but by all levels, including private enterprise. This section provides guidelines for action by discussing the variety of implementation techniques and the importance of relying on as many techniques as practical in carrying out open space and outdoor recreation proposals. General responsibilities for all levels of government and private enterprise are also discussed.

Because programs at one level of government continuously affect programs and responsibilities at other levels, emphasis should be placed upon definitive assignments and acceptance of responsibilities to carry them out. All governmental agencies have responsibility to:

1. Strive for the highest public benefits per dollar spent in the provision of outdoor recreation areas and in the preservation of open space.
2. Ensure that the public has opportunities to enjoy a broad variety of recreational activities.
3. Make the determination of priorities one of the most important ingredients in planning and programming to meet short-range and long term needs.
4. Realize the importance of recreation, open space preservation and environmental protection in the acquisition, development and management of public lands.

FEDERAL

EXISTING FEDERAL ROLE

The Federal Government provides extensive, broad-scale services in the field of outdoor recreation. Federal responsibility ranges from the management of millions of acres of parks, forests and open space areas to research, coordination, and grant-in-aid programs. Primary Federal responsibility for the provision of open space and outdoor recreation in Maryland includes:

- Conservation of unique natural areas.
- Protection of river basins and watersheds affecting large rivers.
- Provisions of large regional or multi-state recreation facilities to serve metropolitan areas.
- Preparation of broad-based environmental research studies.
- Preservation of national historic sites and landmarks.

Federal bodies involved in recreation include:

Departments

Agriculture
Commerce
Defense
Health, Education & Welfare
Housing & Urban Development
Interior
Labor
Transportation
Treasury

Agencies

Appalachian Regional Commission
General Services Administration
Small Business Administration

Federal activities which have a significant effect on outdoor recreation in Maryland are outlined.

Department of Agriculture

The Farmers Home Administration has granted several loans to individuals in the Baltimore Region for the development of income-producing outdoor recreation enterprises.

The Soil Conservation Service owns no land in Maryland but is responsible for the construction of impoundments for flood control.

Department of Defense

The Department currently owns over 131,800 acres in the State. Although little is open for public recreation, it has effectively preserved vast quantities of open space from private encroachment. However, the Defense Department also presents one of the major impediments to water-oriented recreation, having restricted over 287,400 acres of water on the Chesapeake Bay and Potomac River.

The Army Corps of Engineers owns 4,924 acres in Maryland and is responsible for numerous navigation and shoreline improvement projects throughout the State. The Corps is also responsible for the construction of major reservoirs, such as the one proposed at Bloomington. A 2,300-acre dam proposed for the Youghiogheny River in Western Maryland will provide a conservation pool of 952 acres. The Federal Water Project Recreation Act established uniform policies for the inclusion of recreation and fish and wildlife enhancement at all Federal Development projects.

Department of Housing & Urban Development

The Office of Metropolitan Planning and Development administers a grant-in-aid program which provides up to 50 percent of the total cost of acquisition and development of recreation facilities in developed areas. Maryland has received open space funds to assist in the acquisition and development of more than 10,600 acres.

Department of the Interior

The Bureau of Outdoor Recreation is concerned exclusively with recreation. The Nation-Wide Plan being prepared by the Bureau will provide a tool for evaluating future recreation trends and planning. The Bureau's responsibilities further include research, coordination with other federal agencies involved in recreation, the provision of technical assistance, and administration of the land and water conservation fund. Maryland has obtained grant-in-aid funds to assist in the acquisition and development of more than 4,000 acres of land for recreation.

The Bureau of Sport Fisheries and Wildlife owns and maintains five national wildlife areas and one wildlife research center in Maryland, comprising over 21,000 acres. Many of these areas are open for fishing, hunting and nature study; and additional interpretive facilities are planned.

The National Park Service, as the largest civilian Federal land holder in Maryland, manages over 21,400 acres of land within the State. This includes several National Parks, Historic Sites, National Monuments, Battlefields, and a National Seashore. The Park Service also administers a grant-in-aid program for the acquisition of historic sites under the National Historic Preservation Act. Although this Act has been only minimally funded, Maryland has received a substantial share for the acquisition of numerous sites.

FEDERAL RESPONSIBILITIES

- Provide national open space and outdoor recreation goals as guidelines for statewide planning.
- Continue technical and financial assistance programs to state, county and local governments and to private enterprises dealing with recreation planning, land acquisition and development.
- Provide and maintain outdoor recreation developments and other open spaces of national significance due to size, or exceptional natural or historic value.

- Develop and maintain recreation facilities on land owned by Federal agencies, where feasible.
- Continue to cooperate and participate financially with all levels of government in planning for urban recreation centers in major metropolitan areas.
- Sponsor special research projects that will help assist the State and its municipalities in open space and outdoor recreation planning, programming and implementation.
- Coordinate Soil and Water Conservation Programs with Statewide planning efforts.
- Continue to emphasize all aspects of highway beautification, including the funding of a scenic highways program.
- Provide coordination between various Federal agencies and other levels of government.
- Establish a national clearinghouse on open space and outdoor recreation research.
- Place emphasis on conserving significant natural areas subject to high development pressures along the Chesapeake Bay, along extensive shorelines, in wetlands, and in scenic mountains.

STATE

EXISTING STATE ROLE

The State is responsible for the development of overall goals and programs to insure the wise use of resources. State land acquisition, development and grant-in-aid programs supplement Federal and county programs to preserve land and water for recreation and open space uses. State agencies which have the most significant effect on open space and outdoor recreation in Maryland are the Department of Natural Resources and the Department of State Planning.

THE DEPARTMENT OF NATURAL RESOURCES

The Department of Game and Inland Fish was responsible for an extensive waterway improvement system and for various studies concerned with the problems and potential of the Bay. These functions have now been absorbed by various agencies within the Department of Natural Resources.

The Fish and Wildlife Administration administers a large portion of State-wide recreation land for wildlife conservation and management. Included are areas available to the public for hunting, fishing and other outdoor activity. There are 24 designated wildlife management areas as well as additional areas within State forests and parks. It is also responsible for an extensive waterway improvement system and for various studies concerned with the problems and potential of the Bay.

The Department of Forests and Parks has primary responsibility for providing recreation facilities in Maryland. The parks forests, natural areas and historic sites managed by Forests and Parks provide recreation opportunities to millions each year. This agency also administers Program Open Space, a State grant-in-aid program for the acquisition and development of recreation facilities.

THE DEPARTMENT OF STATE PLANNING

The Department of State Planning functions as the Governor's staff agency in planning matters, as an advisory, consultative and coordinating agency. Its planning activities are coordinated with the planning activities of other departments, agencies or instrumentalities of State or local government, providing planning assistance, stimulating public interest and participation in the development of the State, coordinating the plans and programs of all State departments, agencies and instrumentalities, and coordinating State programs with

the Federal Government. The Department of State Planning is responsible for developing the State Comprehensive Open Space and Outdoor Recreation Plan, the primary tool for all future recreation and open space land use decisions in the State. This agency also provides the open space-outdoor recreation input into the State Development Plan and Capital Improvements Program.

OTHER

The State Department of Transportation, the Department of Economic and Community Development through the Maryland Historical Trust, also provide valuable inputs into the total recreation development program.

STATE RESPONSIBILITIES

- Protect unique natural areas designated in the Comprehensive Open Space and Outdoor Recreation Plan.
- Provide research and planning assistance to counties and municipalities.
- Provide guidelines to land owners to assist them in determining the recreation potential of land and to guide them in practical, attractive and economic development of facilities and services.
- Clearly spell out enabling legislation on open space and flood plain zoning to county and municipal jurisdictions.
- Plan highways in close cooperation with local governments and with particular attention to protecting parks, public recreation areas and outstanding scenic areas against encroachment.
- Inventory, protect and enhance the scenic and recreational values of existing and proposed roads.
- Protect and enhance historic sites.
- Maintain an up-to-date State Comprehensive Outdoor Recreation and Open Space Plan which will include annually updating the five-year acquisition and development schedules.
- Assess facilities available within each State region and recommend means to overcome recreation and open space deficiencies.
- Adopt legislation enabling the State and its local governments to apply modern techniques for land acquisition and development, and for open space preservation.
- Acquire and preserve significant natural areas and land along stream valleys and other waterways, and assist local government to initiate similar programs.
- Continue land acquisition and development programs, with emphasis on providing for open space and outdoor recreation needs in urban and metropolitan areas.
- Continue to encourage comprehensive planning and open space and outdoor recreation planning on a regional basis.
- Acquire, develop and manage recreation areas that clearly serve the needs of persons throughout the State. Forests, historic sites, scenic rivers, scenic highways, rest areas, state parks, public hunting areas and fish and wildlife management areas are examples.
- Undertake a scenic and historic road program based upon the adopted Statewide Historic Preservation Plan.
- Cooperate with adjacent states in open space and outdoor recreation planning and development.
- Coordinate various federal, state and local government planning efforts and outdoor recreation developments in the State.
- Encourage private enterprise to provide recreation facilities that meet specialized needs and which offer reasonable profit-making

opportunities.

- Monitor water quality to insure high water quality for recreation opportunities and ecologic balance.
- In cooperation with county and local governments, establish effective air quality enhancement programs and noise abatement programs.
- Establish a system in which all levels of government and private enterprise periodically submit inventories of recreational facilities, land needed in the immediate future, and acquisition and development costs.
- Encourage city-county, county-state, state-municipal and other relationships to acquire land and/or develop recreation facilities.
- Promote Maryland's State Parks, Forests and Public Hunting and Fishing grounds, via news and other media.
- Expand efforts to inform recreational planning and development agencies, private developers and the general public of available assistance programs.
- Provide large-scale facilities designed to supply multi-use recreational areas for resource-oriented outdoor recreation activities.

Although all of the above responsibilities are considered important for implementing the Comprehensive Outdoor Recreation and Open Space Plan, there are certain types of responsibilities and techniques that, given limited financial and manpower resources, the State would prefer to emphasize. These involvement preferences are intended to serve as a general guide until more detailed priorities and responsibility identification systems are initiated.

COUNTY

EXISTING COUNTY ROLE

In most cases, county park and recreation agencies provide for the acquisition, development and maintenance of recreation facilities ranging from tot lots and playgrounds to regional parks. Eighteen counties have established park and recreation commissions or boards. It is essential that the remaining counties follow suit to insure a balance of local recreation programs and facilities throughout the State.

The facilities provided by county jurisdictions are often the user-oriented, convenience-type, mainly to serve resident populations.

COUNTY RESPONSIBILITIES

- Protect unique natural areas designated in the Comprehensive Open Space and Outdoor Recreation Plan, through direct acquisition or some other means.
- Develop and adopt a Comprehensive Plan to provide coordinated, long-range policy guidelines for land development, recreation and open space preservation.
- Develop and submit to the Department of State Planning a five-year acquisition and development schedule, to be updated annually, for all open space and outdoor recreation projects.
- Explore the feasibility of establishing regional park and recreation commissions, or a county park and recreation commission as an alternative, to plan, program, design and develop outdoor recreation resources.
- Use conservation zoning as a means of protecting areas unsuitable for intensive development, such as marshland, flood plains, rugged terrain, areas of poor drainage, areas of historic value or high recreational value.
- Prepare an Open Space and Outdoor Recreation Plan consistent

TABLE 29 STATE INVOLVEMENT PREFERENCES — RECREATION & OPEN SPACE ACQUISITION & DEVELOPMENT		
Plan Area Types & Examples	Acquisition Action	Development Action
ACTIVITY CENTERS		
1. State Parks needed, based on demand and land and facility requirements and deficits.	Fee simple acquisition and donations and trade-offs. Excess acquisition to protect the investment and to encourage private enterprise participation is desirable.	Development responsibility and/or encourage private enterprise provision of specified facilities.
2. Multi-Purpose County or Regional Parks needed, where the jurisdiction directly responsible is not totally capable of providing them.	Acquire land to be specifically designated for this purpose, provided the following conditions are met: 1) the jurisdiction incorporates development of the facility in its Master Plan and Capital Improvements Program, 2) the jurisdiction proves that attempts have been made to provide the necessary land and facility at levels other than the State level, and 3) the jurisdiction agrees to purchase the land at the State's original cost if the jurisdiction is unable to develop within a specified period of time.	State would consider joint development in area of high In-State and Out-of-State demand and need.
3. Other Activity Centers such as those within or adjacent to a segment of an officially designated or planned State Scenic River or Scenic Road.	Acquire in fee simple and hold for later development.	Longer-range development with State totally developing or sharing the responsibility.
4. Historic Sites and Buildings of State-wide significance.	Acquire.	State preservation and restoration if in combination with State Parks; otherwise, turn over to non-profit entity or other governmental level to restore and maintain.
LIMITED USE AREAS		
1. Areas of Emphasis along officially designated State Scenic Rivers or Scenic Roads.	Acquire totally, or less than fee simple.	Limited development by State. Emphasis on allowing other jurisdictions or private enterprise to develop small pockets of passive recreation under rigid State guidelines.
CONSERVATION AREAS		
1. Areas of unique natural features.	Acquisition and/or less than fee simple control, particularly easements.	Hold as open space for nature study.
2. Wetlands in designated areas of emphasis.	Easements or purchases of development rights.	No development.
3. Areas vulnerable to urban growth pressures — strategic and necessary for implementation of approved regional growth and settlement patterns.	Easements or purchases of development rights.	No development.

with the State's goals in the Maryland Comprehensive Open Space and Outdoor Recreation Plan.

- Adopt cluster subdivision, planned unit development and new town zoning provisions which have mandatory land dedication for open space and recreation development.
- Provide outdoor and indoor recreation areas oriented primarily to resident needs rather than to the needs of tourists.
- Protect and enhance historic sites and areas.
- Develop and maintain outdoor recreation areas with facilities and programs extending beyond the capabilities of small incorporated municipalities, but not having state-wide significance.
- Encourage private development of recreation facilities by helping developers to identify recreation demand and need, by creating more equitable and reasonable zoning measures for private recreation, by acquiring land in advance and making it available for private recreation development, and by exploring new and innovative ways to create mutually beneficial county/private recreational partnerships for acquisition, development and management.

MUNICIPAL

EXISTING MUNICIPAL ROLE

At this level, recreation and open space responsibilities lie in the provision and administration of intensely developed, user-oriented facilities, with sites readily accessible to the local population. Two-thirds of Maryland's population lives in metropolitan areas and needs recreation facilities for a few hours' enjoyment not requiring a long trip by car.

Besides a recreation program coordinated with boards of education, local areas are responsible for developing a system of tot lots and playgrounds, neighborhood parks and community-wide parks.

Many local areas still do not recognize recreation as one of their major responsibilities, on the same level as public works, sanitation and water supply.

MUNICIPAL RESPONSIBILITIES

- Consider recreation and open space preservation as an increasingly important need in local areas, on par with public works and public safety.
- Provide intensively developed outdoor recreation areas that are easily accessible to the local population.
- Consider the importance of open space and recreation when planning for other local facilities.
- Seek opportunities to utilize a variety of techniques to assure open space preservation and future recreation development.
- Seek larger appropriations for recreation programs and for the acquisition of land for recreation and open space.
- Utilize urban renewal, cluster development and zoning controls to set aside areas for parks, plazas and malls.
- Maintain a close working relationship with the State and keep apprised of new technical assistance and grant programs.
- Protect unique natural areas designated in the Comprehensive Open Space and Outdoor Recreation Plan.
- Work with the county to develop and adopt a Comprehensive Plan to provide coordinated long range policy guidelines for land development, recreation and open space preservation.
- Explore the feasibility of establishing a municipal park and

recreation commission to plan, program, design and develop outdoor recreation resources. Cooperate with County Park and Recreation Commissions.

- Provide outdoor and indoor recreation areas oriented to meet local resident demands.
- Protect and enhance historic sites to create local scenic and educational interest.

PRIVATE

EXISTING PRIVATE ROLE

Specialized facilities such as ski areas, marinas, golf clubs, swim clubs, and sports centers often extend beyond usual governmental facilities and are provided by private enterprise.

The private sector and quasi-public sector (civic organizations and clubs) will engage more and more in the business of recreation and leisure as incomes rise, better travel facilities are provided, and leisure-time increases. This encouraging trend emphasizes the desire to strengthen the partnership between government and private enterprise as recreation demands grow and diversify.

PRIVATE RESPONSIBILITIES

- Provide a variety of specialized recreation facilities and supportive services that complement public recreation facilities.
- Provide urban country clubs, multi-purpose recreation complexes, innovative resorts and other modern, unique facilities.
- Utilize the State Comprehensive Outdoor Recreation and Open Space Plan to assist in planning facilities to meet growing recreation needs.
- Plan, design and build recreation developments that respect the environment.

IMPLEMENTATION TECHNIQUES

The following major techniques are considered most pertinent in accomplishing the policies and recommendations of this Plan and for carrying out the responsibilities designated for each level of government and private enterprise. Most of the techniques presented here are based upon existing legislation. However, some techniques such as excess condemnation, tax rebates, and other untried measures are unauthorized by existing legislation; but they are presented here to show the need for applying a multiplicity of techniques. The framework must be set for innovative approaches. In the interim, conventional techniques for implementing plans and programs should be explored fully.

ACQUISITION

Outright Purchase is a real estate transaction in which property is acquired in fee simple. This technique should be applied when strategic land areas are needed for clearly identifiable preservation and development purposes which are programmed for public recreation use. It is the soundest technique for assuring complete protection and development control.

Installment Purchase is an acquisition method in which a purchaser negotiates a per-acre price with the owner and agrees to buy a certain number of acres per year. The owner is relieved of real property tax responsibilities, commencing at the time the agreement is made. The owner may choose to remain on his land until all is sold and paid for.

Long-Term Lease with Option to Buy involves the negotiation of a lease price with the owner and includes conditions for use and eventual purchase of the property.

Purchase and Lease-Back involves the acquisition of a site while it is still available at low cost. The purchaser then leases the land for use in

accordance with policies for scenic preservation and recreation. The purchase and leaseback can be disadvantageous because it puts the purchaser-lessor in the position of a landlord responsible for property management and maintenance. Also, land purchased by a governmental body is tax exempt.

Purchase and Resale is a technique in which land is purchased and resold under conditions or restrictive covenants. After resale, the original buyer is relieved of ownership and maintenance responsibilities and the land is taxable.

Easements allow land to remain in private ownership and to be used only for the purposes specified in the easement agreements. Only those rights necessary to regulate the use of the property are purchased. A fair price is determined by the difference between market value of the land when unrestricted and the value of land subject to the restrictions set forth in the easement. The easement technique allows land to remain on the tax rolls and permits continuing use by the present owner. The cost of easement acquisition can be reasonable in some areas; but in intensively developed areas, easements are not usually feasible. Easements are also donated.

Condemnation through the right of eminent domain allows governments to acquire land for a well-defined public purpose. Eminent domain could include full property rights or the acquisition of easements and leases. Condemnation involves the determination of a fair market value for the property and a clear definition of the public purpose for which it is being condemned. This approach is used usually only if fee-simple acquisition is not possible at a fair price or if an owner refuses to sell.

Donations of Land are sometimes made by private owners or organizations interested in a certain cause. Land donations can be encouraged by granting life time occupancy rights and by arranging certain tax advantages to the owner.

Permanent Land Trust and Conservation Funds are non-profit, tax-exempt trusts, usually organized by a citizen-supported, non-profit service agency. Assets of the trust are usually handled and invested by a bank as trustee. The administration and management of lands acquired by gift or bequest are the responsibility of the service agency. The income received from investments is used for maintenance of natural areas gifted to the trust. This approach enables donors of land, money or securities to take advantage of tax deductions while being assured that the future use of the land donated will be controlled according to the specifications of the donor.

Open Space Land Bank is a technique under which a public agency or non-profit entity acquires strategically located recreation or open space land, and retains the land in a land bank until it is appropriate to sell, lease or develop the land for a public purpose. This approach assures that the land will be available for a particular use in the future with savings in land acquisition to the developer.

Land Exchange is a means of trading the ownership or control of land between one owner and another to obtain mutual advantages.

Voluntary Agreements may be applied to commit another use to privately-owned agricultural land, large industrial holdings, large forest areas, private utility easements and land under the ownership or administration of government agencies. These agreements would be strictly voluntary, with permission to use the land only in clearly specified ways.

TAXATION

The power to tax can be used as a tool for preserving open space and recreation land.

Tax exemptions are sometimes authorized for land that provides

public benefit such as historic places, public service areas, and private lands open to hunting or fishing or other such public uses. This can be an important device for private enterprise with land holdings. Although the land may not be contemplated for development, it may be needed for other purposes by the owner. Private enterprise could provide public benefits by keeping these lands undeveloped or having them developed in accordance with the Plan, while enjoying a tax benefit. Chapter 576 of the Annotated Code of Maryland allows tax credits up to 100 percent of the total property tax if the owner grants a perpetual easement to the county, state or federal government.

Preferential Assessment is an approach under which land being taxed because of its use-potential can be kept in its present use for a longer time. In this technique, land is assessed at its agricultural or limited-use value in order to remove tax pressures on owners to sell at a speculative price for profit. Although this technique does not assure long-range open space preservation, it does give the owner a continuing tax advantage and does not preclude eventual sale at a considerable profit. This technique requires a clear designation of the restrictions on the land for open space and related uses. Also, the taxing bodies must be compensated for any loss of revenue.

Tax Foreclosures are applied to delinquent properties. This technique should be pursued if properties are in strategic locations for recreation and open space purposes, or if land-exchange possibilities exist.

Long-Term Land Use Stabilization Contracts are related closely to preferential taxation. Here, the local government and the owner of land which is designated as open space, farmland, woods or some other similar use in a comprehensive plan, agree that the land will be kept in its present use for a long period, say five or ten years, and that it will be assessed at its current use value.

Special Districts for scenic preservation and recreational development involve the delineation of a legal or physiographic boundary and the determination of specific responsibilities. Special districts would have powers to tax and to purchase and maintain open space and recreational land. Special scenic corridor districts or conservation district should be considered.

STANDARDS AND REGULATIONS

Comprehensive Planning provides the framework for land development and use practices. Planning, a continuing process, should be performed in even greater detail in each local area. Planning *per se* is not touted as an effective implementation device. There is real value in its use as a guideline for decision-making, in its factual basis, in its forethought, and its logic.

Zoning has been in use in the counties and municipalities of Maryland for many years. The concept, as it applies to recreation and open space, is useful for regulating land use, density of development, and the protection of areas in which open space and natural characteristics should be preserved.

- **Cluster Zoning** allows dwelling units to be placed closer together than normally permitted in the district in which they are located, providing maximum overall density is observed. Open space corridors can be created between clusters of housing. This concept is also applicable to areas of unique topography where clustering can be focused on developable portions of land, leaving natural areas that are difficult to develop, virtually

unobstructed.

- **Flood Plain Zoning** is particularly significant in the preservation of scenic beauty and natural areas along rivers and streams because it provides for the regulation of development in high-risk, flood-hazard areas.
- **Steep Slope Zoning** may be used to preserve land which is excessive in slope. In steep slope zoning districts, depending upon the slope and its character, development is either highly restricted or not permitted. This is a vehicle for preserving stream valley corridors where precipitous cliffs and steep hillsides are integral parts of the scenic experience.
- **Other Zoning Approaches** may be used to regulate land development so that open spaces and natural areas are preserved. Large-lot zoning, agricultural zoning and conservation-district zoning are particularly effective.

Subdivision Regulations must work in concert with zoning in the preservation of open space and other scenic and natural features. These regulations apply to the layout of lots, streets, drainage courses, utilities and other aspects of land development. Of value in scenic river preservation are the prevention of sewage emission into streams, the prevention of soil erosion and siltation, and the donation of land funds for recreation as a part of the subdivision.

Official Maps outline the locations programmed for public improvements and set forth restrictions on development within these boundaries. In most cases, there is a maximum period within which the land can be held without construction of the public improvements, following which the governing agency must either purchase the property or forfeit control and restrictions on its development.

Public Utility Policies and Staging are elements of planning and programming which affect significantly the patterns of urban development. The staging and construction of utilities to service new developments will have a profound effect on the protection of corridors and the reservation of strategically located recreation areas.

RESPONSIBILITIES, TECHNIQUES, AND THE PLAN

Primary responsibilities, effectively combined with the most appropriate techniques for each level of government are integral parts of the Plan. The following table attempts to relate techniques and responsibilities to recreation and open space items represented in the State's Recreation and Open Space Plan and in the State Plan, as they apply to each Region.

FINANCING & ASSISTANCE FOR OPEN SPACE, RECREATION AND RELATED PROGRAMS

Many Federal programs assist in the overall development of outdoor recreational opportunities in Maryland. The two major Federal programs have been catalysts for open space and outdoor recreation development in recent years; the Open Space Programs of the Department of Housing & Urban Development and the Land & Water Conservation Fund of the Department of Interior. A third, but less significant Federal program in use in Maryland is the Department of Agriculture's "Greenspan Program." A fourth program is the Appalachia Program of particular importance in Western Maryland.

In addition to the Federal grant-in aid programs, the State has Program Open Space for 1969. Program Open Space for 1969 provides up to \$86 million dollars to both state and local governments for acquisition and development of open space acreage.

A majority of the total cost of outdoor recreational development in Maryland is borne by the State, its counties and municipalities, with the assistance of Federal Land and Water Conservation Funds and Housing & Urban Development Open Space Funds. In the past, State agencies have used funds from yearly appropriations and from additional sources of money as a means of financing outdoor recreation projects. Quite often, these funds have been supplemented by appropriations earmarked for a special project. The Department of Natural Resources has utilized a boat titling tax to finance waterway improvements. Hunting and fishing licenses provide an additional source of revenue to the Fish and Wildlife Administration. Lastly, obligation bonds have been a principal source of revenues used by the Department of Natural Resources has also obtained revenues from the issuance of franchises and concession contracts in State parks.

Local governments have financed recreation development projects in a similar fashion; through tax supported revenues, concessions, fees, gifts, and obligation bonds. In addition, they have used Federal and State grants to assist wherever and whenever possible.

Since the State and local governments in Maryland pay for most of the recreation development programs in the State, this raises a serious question: How will State agencies and local governments be able to continue to finance future outdoor recreational development in Maryland?

The need for outdoor recreational opportunities in Maryland is increasing at a rapid rate. Concurrently, it is difficult for State agencies and local governments to keep pace with expanding demand because the responsible agencies must work within budget constraints to operate and maintain present facilities while adding new facilities at the same time. Further, the cost of outdoor recreation has been increasing at a rapid rate. New sources of revenue are urgently needed to adequately provide for present and future recreational needs. This requires more effective and widely spread use of the following Federal and State assistance programs.

STATE OUTDOOR RECREATION PROGRAMS & LEGISLATION

Various legislation and programs have been developed by the State of Maryland to preserve its open space and develop outdoor recreation areas. These acts and programs are briefly described below to familiarize the reader with the purpose of each program or activity.

STATE AGENCIES

DEPARTMENT OF NATURAL RESOURCES

The Department of Natural Resources was established in 1969, incorporating the several natural resource agencies of the State into one agency to effectively preserve and develop the natural resources of Maryland. The Department is the principal department of State government to facilitate the coordination of natural resource planning and management throughout the State. Seven major entities exist within the Department.

- The **Maryland Environmental Trust** was created in 1967 to conserve, improve and perpetuate the quality of the environment. In addition, the Trust was granted the authority to acquire, improve, lease, sell and manage properties in furtherance of its given purposes.

Table 30
RELATIONSHIPS BETWEEN TECHNIQUES, RESPONSIBILITIES & THE PLAN

MAJOR IMPLEMENTATION TECHNIQUES	Major Recreation Activity & Open Space Areas to which Techniques Most Appropriately Apply			MAJOR RESPONSIBILITY					
	Activity Centers	Limited Use Areas	Conservation Areas	STATE	FEDERAL	COUNTY/REGIONAL	MUNICIPAL	PRIVATE NON-PROFIT	PRIVATE
Technical Assistance									
o Research	A	A	A	X0	*	X0	*	X	*
o Direct staff involvement	A	A	A	X0		X0	X0	*	
o Public relations & education	A	A	A	X	X	X0	*0	*	
Financial Assistance									
o Direct grants (including matching)	A	A		X0	X0			X0	
o Guaranteed loans	A	A	A	*0	X0			X0	
o Low interest loans	A	A		*0	X0				X0
o Interest-free loans	A	A	A	*0	X0				
o Conventional loans	A							X0	X0
o Donations of money	A	A	A					X	X
o Service in kind	A	A	A	X		X	X		
Land & Facility Acquisition									
o Outright and installment purchase	A			X	X	X	X	X	X
o Purchase & lease-back or resale	A	A	A	X0		X0	*0	X0	*0
o Easements & purchase of development rights		A	A	X		X	X	*	
o Condemnation through right of eminent domain	A			X	X	X	X		
o Donations of land or rights in land	A	A	A				*	X	X
o Permanent land trust & conservation fund		A	A					X0	X0
o Open space land bank	A	A		X0		X0		*	
o Land exchange	A	A	A	X0	X0	X0	X0	X0	X0
o Voluntary agreements to permit recreational or open use of land		A	A		*	*	X0	*	X0
Taxation									
o Tax exemption		A	A	*		X	X		
o Tax deferral		A	A			X	X		
o Tax foreclosures	A	A	A			X	X		
o Tax credit		A	A			X	X		
o Long-term land use stabilization contracts		A	A			X	X		
o Special preservation & recreation districts with taxing powers	A	A	A			X	X		
Standards & Regulations									
o Comprehensive Planning	A	A	A	X0		X0	X0	*	
o Zoning	A	A	A			X0	X0		
:: Cluster & planned unit develop.	A	A	A			X	X		
:: Resource/conservation district		A	A			X	X		
o Historic preservation	A	A	A	X	X	X	X	*	
o Outdoor advertising control	A	A	A	*	*	X	X		
o Compensable Zoning		A	A			X	X±		
o Official map	A	A	A			X	X		
o Subdivision regulations	A	A	A			X0	X0		
o Public utility location & phasing	A	A	A	X	*	X0	X0		*
o Soil Conservation	A	A	A	X	X	X	*		
o Environmental quality	A	A	A	X	X	X	X	X	X

Comparative Level of Responsibility:

A = Applicable

X = Normally most appropriate

* = Appropriate

o = Close partnerships most desirable-above normal planning & coordination



*"A River is more than an Amenity — it is a Treasure."
Justice Oliver Wendell Holmes*

- The **Scenic Rivers Review Board** was created in 1968 to develop a Scenic River Program in Maryland and to establish a State policy to protect the quality and fulfill the vital conservation purposes of rivers within this system. Presently, the Patuxent, Pocomoke, Youghiogheny, Wicomico and Severn Rivers have been officially designated as Scenic Rivers.
- **Forests and Parks** maintains numerous facilities throughout the State and provides a recreation service which assists in the promotion and organization of local recreational systems by local governments. It also administers the "Program Open Space" that provides assistance to local jurisdictions within Maryland to be used exclusively for the purposes assisting State agencies and political subdivisions with providing outdoor recreation and open space areas.
- **Maryland Environmental Service** was created in 1970 to provide statewide waste purification and disposal services.
- **Fish and Wildlife Administration** is authorized to acquire, develop, and maintain numerous wildlife management areas, public fishing lakes and ponds, public hunting areas and conduct cooperative programs throughout the State.
- **Water Resources** is authorized to plan and supervise the multiple development of the State's waters including the regulation of appropriation of waters, construction of reservoirs and dams, abatement of water pollution and flood plain encroachment.
- Furthermore, the **Department of Natural Resources** is authorized to plan, develop, manage and conserve the Chesapeake Bay and related tidal areas and shorelines and among other responsibilities the inclusion of water-oriented development, shore erosion control, waterways improvement, construction of boat launching ramp, etc.

DEPARTMENT OF STATE PLANNING

In 1969 the Department of State Planning was established as a principal Department of State government. The Department was charged with the responsibility to coordinate all comprehensive State planning efforts and to provide technical assistance to other State agencies and political subdivisions to supplement and develop their planning capabilities.

DEPARTMENT OF TRANSPORTATION

The State Department of Transportation is authorized to acquire strips of land necessary for the restoration, preservation and enhancement of scenic beauty within and adjacent to Federally-aided highways. It is also authorized to develop rest stops, information centers and highway-related recreation areas throughout Maryland.

DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

The St. Mary's City Commission is authorized to acquire, restore, develop and maintain the original state capital as a historic park. Sightseeing, picnicking, historic and natural interpretation to be provided on the site.

GENERAL STATE LEGISLATION AND PROGRAMS

Severn River Pollution

Legislation in 1970 provides for the control of the pollution of the Severn River as caused by sewage establishes standards for sewage outflow from treatment plans in the Severn River watershed, and provides penalties for violations.

Wetlands

In 1970, specific legislation was passed that provides a State policy for

the preservation of wetlands in Maryland by regulating the filling and dredging of wetlands. It also authorizes the Secretary of the Department of Natural Resources to prohibit certain activities on specific wetlands.

Mine Drainage & Reclamation

Legislation established the Land Reclamation Committee to study, recommend and approve procedures for the prompt and adequate reclamation, conservation and revegetation of areas affected by open-pit mining with the State.

In 1970, the Secretary of the Department of Natural Resources authorized to abate, prevent and control pollution from abandoned mines. The bill also allows the State a debt of \$5 million to fund the capital cost of the mine pollution program.

Legislation was passed in 1970 to repeal laws relating to enforcement of air quality control and provides for new and additional procedures for enforcement of air quality control, for injunctive relief and assessment of civil penalties against violators for the creation of municipal and county air pollution ordinances and regulations and for the requirement that permits be issued for the operation of equipment contributing to air pollution.

Sedimentation Control

Legislation was passed in 1970 to provide a statewide sediment control program which affects the water of the State.

LEGISLATION AFFECTING LOCAL GOVERNMENT

Senate Bill 168, 1968

Authorizes tax credits up to 100 percent for open spaces and open areas in Frederick County.

Senate Bill 711, 1969

Provides for tax credit up to 100 percent for open spaces in Carroll County.

Senate Bill 139, 1969

Provides for the assessment of agricultural and planned development lands on the basis of current use rather than potential use.

Encourages farming and the preservation of open space as amenities necessary to human welfare.

Prevents forced conversion of such open space to more intensive uses as a result of economic pressures.

House Bill 229, 1969

Grants a tax credit for open space in Montgomery County provided the State, local or federal government or the MNCPPC holds the easement or interest, conveyed for not less than five years or in perpetuity.

House Bill 367, 1970

Removes limit on spending which may be required by the Washington Suburban Sanitary Commission to control pollution.

House Bill 506, 1970

Amends existing laws concerning hearings for permits for a landfilled refuge disposal system in order to require the Department of Health to issue a permit only if all county zoning and land use requirements are met and a statement is received from the County Commissioners or Council that they do not oppose the issue of a permit.

ACQUISITION & DEVELOPMENT ACTIVITIES

A five year land acquisition and development schedule for Federal and State facilities throughout Maryland and local facilities in the Baltimore and Suburban Washington Regions, the highest demand areas of

Maryland, has been prepared and is submitted in a separate report which will be reviewed and updated annually. The schedule shows the relationship between fiscal programs of the various governmental levels and what is contemplated in the way of facilities and land. In the Action Plan phase, facilities and land contemplated by all levels of government will be reviewed, analyzed and, if necessary, modified to meet the greatest recreation demands.

State land acquisition and facility development programmed through 1977 are summarized on the following pages. The Maryland Department of Natural Resource's priority system that is used to evaluate potential acquisition and development activities is also included. Seven primary objectives underlie the Department's priority systems:

- Provide outdoor recreation experiences in a variety of state parks; these to include ocean, bay, mountain, stream valley, plateau and river areas.
- Place user facilities within the parks to protect and enhance natural resource values.
- Provide user facilities throughout the State with special emphasis in areas closest to population centers with greatest deficiencies.

SUMMARY SCORES FOR ACQUISITION

Area	Population	Natural Features	Encroachment	Acres Needed	Judgment	Total
State Parks						
1 Patapsco	24	19	24	21	10	98
2 Rosaryville	21	11	24	24	10	90
3 Gunpowder	15	19	24	21	10	89
4 Seneca Creek	18	18	18	21	10	85
5 Patuxent	18	17	18	21	10	84
6 Susquehanna	12	20	6	6	10	54
7 Morgan Run	18	15	3	3	10	49
8 Deer Creek	9	17	6	6	10	48
9 Point Lookout	3	21	6	6	10	46
10 Cunningham Falls	9	20	3	3	10	45
11 Greenbrier	9	16	3	6	10	44
12 Fort Frederick	6	17	3	6	10	42
13 St. Mary's River	3	15	6	6	10	40
14 Rocky Gap	3	21	3	3	9	39
15 Principio Furnace	9	15	3	3	8	38
16 Chapel Point	6	15	3	3	10	37
17 Purse	6	15	3	3	9	36
18 Janes Island	3	17	3	3	9	35
19 Falling Branch	9	9	3	3	10	34
20 Wye Island	3	15	3	3	9	33
21 Tuckahoe	3	14	3	3	9	32
22 Marshy Hope	3	13	3	3	9	31
23 Sassatras	3	13	3	3	8	30
24 Mount Savage	3	13	3	3	7	29
State Forests						
1 Cedarville	18	16	3	3	10	50
2 Elk Neck	6	18	3	3	10	40
3 Green Ridge	3	21	3	3	9	39
4 Savage River	3	20	3	3	9	38
5 Swallow Falls	3	20	3	3	8	37
6 Pocomoke	3	17	3	3	10	36
7 Potomac	3	16	3	3	10	35
8 Wicomico	6	10	3	3	10	32
Natural Environment Areas						
1 Soldiers Delight	21	14	24	21	10	90
2 Mattawoman	18	14	24	24	9	89
3 Severn Run	24	14	15	15	10	78
4 South River	24	19	3	3	10	59
5 South Mountain	9	16	3	3	10	41
6 Zekiah Swamp	3	16	3	3	10	35

- Provide a logical sequence of development within a park by staging development in complete operational units to insure the operation of facilities at the earliest possible date.
- Concentrate more money in fewer projects to achieve a more efficient development process and greater user benefits.
- Provide a variety of park development facilities which are sensitive to the needs of each of the State's regions, and which complement local and regional facilities.
- Provide opportunities for increased investment of private capital in the State park system.

The scoring system that the Department of Natural Resources uses to determine priorities for its acquisition and development program is considered a reasonable, rational and easily administered system. But it must be viewed as only a GUIDE for decision making since no formula can take into account the many complexities involved in any acquisition and development program. While this report only lists forests and parks areas, other natural resource areas such as wildlife management areas and trails can be incorporated into the system.

FIVE YEAR STATE PARK, FORESTS & NATURAL ENVIRONMENT AREAS ACQUISITION PROGRAM						
FISCAL YEARS 1973-1977						
(All dollar figures are in 000's of 1971 dollars)						
Priority	Park	1973	1974	1975	1976	1977
1	Patapsco	1000	500	1000	1000	1000
3	Gunpowder	800	300			
4	Seneca Creek	800	1000	1000	500	
5	Patuxent	800	800			
6	Susquehanna		120			
7	Morgan Run			500	260	
8	Deer Creek		125			
12	Fort Frederick		200	700	1000	
13	St. Mary's River	500		500	700	
15	Principio Furnace				40	
17	Purse				500	500
18	Janes Island			300		
19	Falling Branch					375
20	Wye Island					1000
22	Marshy Hope					115
23	Sassafras					900
24	Mount Savage					110
	Subtotal	3,900	3,105	4,000	4,000	4,000
	Forests					
1	Cedarville	110		200		
2	Elk Neck		168	200	200	175
3	Greenridge	300	200	200	400	425
4	Savage River	70	220	200	200	200
5	Swallow Falls	70				
6	Pocomoke	100	200	200	200	200
7	Potomac	100	90			
8	Wicomico		60			
	Subtotal	750	938	1,000	1,000	1,000
	Natural Environment Areas					
1	Soldiers Delight	300	200	300	400	
2	Mattawoman	200	200	200	300	500
3	Severn Run	200	200	200		
4	South River					
5	South Mountain	100	162	300	300	500
6	Zekiah Swamp					
	Subtotal	800	762	1,000	1,000	1,000

THE STATE ACQUISITION PRIORITY SCORING SYSTEM

Four equally weighted factors are considered important in establishing the priority scoring system for acquisition.

The first factor is based on the resident population within an hour's driving time of the project site; the 1970 census data are used to estimate the population. Three points are assigned to the project site for each increment of 250,000 persons residing within the one hour driving zone.

The second factor is a natural resources score used to contrast the natural values of alternative project areas. Six factors — water-based, water quality, topography, forest cover, edge and unusual geologic features — are used in the analysis. The factors for each project site are rated from 0 to 3, resulting in a total possible score of 24.

The third factor considers the danger of despoilation of potential project sites due to open space being diverted to more intensive uses. Based upon the projected conversion of open space for each county of the state by the year 1980, project sites are awarded a maximum of 24 points. Three points are assigned for each unit of 6250 acres estimated to be converted by 1980.

The fourth factor recognizes the need for additional state natural resource acreage in each county of the state. Three points are assigned for each unit of 4,000 acres needed by 1975, identified by the Open Space and Recreation report prepared by the Maryland Department of State Planning in 1967.

A Judgment Score from 0-10 is included in the system to account for a number of variables which affect the acquisition of a park and are not evaluated in the other criteria. Such factors as schedule of proposed development, existence of a master plan, association with federal projects, natural beach, historical significance and others are some of the variables considered in determining the judgment score.

Each of the existing State parks, forests and natural environment areas was evaluated against the scoring system. The results are summarized, followed by a five year acquisition program.

THE STATE DEVELOPMENT PRIORITY SCORING SYSTEM

Four equally weighted factors are considered important in establishing the priority scoring system for development. The first, population, is based on the resident population within an hour's driving time of project sites. The 1970 census is the source for estimating population. A total of 24 points is achieved for a service population of 2,000,000, while 250,000 or less receive a score of 3.

The second factor is a natural resources score which contrasts the natural values of alternative park areas. Six factors — water-based, water quality, topography, forest cover, edge and unusual geologic features — are used in the analysis. The factors for each project site are rated from 0 to 3, resulting in a total possible score of 24.

The third factor used is the type of development proposed at the project site; parks which have the greatest variety of developmental schemes receive the greatest number of points. The standard BOR classification of park areas is made relevant to reflect development needs in Maryland. For example, six points are established for each type of development such as intensive, general, natural environment and historic and cultural. 24 represents a perfect score.

The fourth factor reflects the economic level in each community, using median income as an index. This factor uses 6 categories in assigning four points to each, resulting in a perfect score of 24. Four points are assigned for each \$1,000 increment in median income.

A Judgment Score is included into the scoring system to account for a number of variables which affect the development of a park and are not evaluated in the other criteria. Such factors as land ownership, status of

SUMMARY SCORES FOR PARK DEVELOPMENT						
Name of Parks	Population	Natural Features	Development	Economic	Judgement	Total
1. Susquehanna	12	20	24	16	10	82
2. Patuxent River	18	17	24	12	10	81
3. Patapsco	24	19	24	4	9	80
4. Cunningham Falls	9	20	24	16	10	79
5. Cedarville	18	16	18	16	10	78
6. Sandy Point	24	20	12	12	10	77
7. Point Lookout	3	21	24	20	8	76
8. Gunpowder	15	19	24	8	9	75
9. Mattawoman	18	14	18	16	8	74
10. Assateague	3	20	18	24	8	73
11. Greenwell	6	15	24	20	7	72
12. Elk Neck	6	18	24	16	7	71
13. Seneca Creek	18	18	24	4	6	70
14. Fort Frederick	6	17	24	16	6	69
15. Severn Run	24	14	12	12	6	68
16. Calvert Cliffs	3	20	18	20	6	67
17. Greenbrier	9	16	18	16	7	66
18. South Mountain	9	16	18	16	6	65
19. Tuckahoe	3	14	18	24	5	64
20. Rocky Gap	3	21	18	16	5	63
21. Rosaryville	21	11	18	8	4	62
22. Janes Island	3	17	12	24	5	61
23. Shad Landing	3	17	12	24	4	60
24. St. Mary's	3	15	18	20	3	59
25. Chapel Point	6	15	18	16	3	58
26. Deep Creek	3	16	12	24	2	57
27. Soldiers Delight	21	14	12	8	1	56
28. Big Run	3	15	12	24	1	55
29. Swallow Falls	3	20	6	24	1	54
30. Martinak	3	13	12	24	1	53
31. General Smallwood	9	13	12	16	2	52
32. Milburn Landing	3	17	6	24	1	51
33. New Germany	3	17	6	24	0	50
34. Deer Creek	9	17	6	16	1	49
35. Gambrill	9	17	6	16	0	48
36. Gathland	9	10	12	16	0	47
37. Herrington Manor	3	13	6	24	0	46
38. Washington Monument	9	8	12	16	0	45
39. St. Clements	3	15	6	20	0	44
40. Dan's Mountain	3	12	12	16	0	43
41. Cedar Hill	3	13	6	20	0	42
42. Purse	6	13	6	16	0	41
43. Casselman Bridge	3	7	6	24	0	40
44. Wye Oak	3	6	6	24	0	39
45. Fort Tonoloway	3	11	6	16	2	38

utility service, existence of a master plan, association with federal projects, previous development, etc., are some of the variables considered in determining the judgment score.

FIVE YEAR STATE PARK DEVELOPMENT PROGRAM FISCAL YEARS 1973-1977						
Priority	Park	1973	1974	1975	1976	1977
1	Susquehanna	100,000	2,542,943	1,439,650		2,206,376
2	Patuxent				(1,000,000 in 1979)	
3	Patapsco	200,000	3,000,000		2,000,000	
4	Cunningham Falls	1,700,000		1,471,740		
5	Cedarville	1,875,000		2,401,260		2,134,595
6	Sandy Point	500,000				
7	Point Lookout	1,181,000		1,149,508		834,937
8	Gunpowder	200,000	2,200,000		2,200,000	
10	Assateague		1,301,851			
11	Greenwell	Development Program Pending Completion of Master Plan				
12	Elk Neck	1,765,000		1,536,323		2,715,038
13	Seneca Creek	100,000	1,729,920		2,947,789	
14	Fort Frederick		1,055,543			3,885,900
16	Calvert Cliffs			2,400,000		1,269,300
17	Greenbrier		100,000		1,447,756	
19	Tuckahoe	1,697,193		939,076		1,098,951
20	Rocky Gap	976,000		2,183,068		498,350
21	Rosaryville			(3,000,000 in 1981)		
22	Jane's Island			(400,000 in 1978)		
23	Shad Landing		249,446			
24	St. Mary's	Development Program Pending Completion of Master Plan				
25	Chapel Point			25,000		
26	Deep Creek Lake		80,000		896,000	
29	Swallow Falls	Development Program Pending Completion of Master Plan				
30	Martinak		943,247			
31	General Smallwood		100,000		1,413,879	
32	Milburn Landing		25,000			
33	New Germany			(2,500,000 in 1980)		
34	Deer Creek		200,000		2,350,000	
37	Herrington Manor	Development Program Pending Completion of Master Plan				
41	Cedar Hill		25,000		100,000	
	TOTAL	10,194,193	13,552,950	13,545,985	13,355,424	14,643,458



THE LOCAL PRIORITY SCORING SYSTEM

A priority scoring system for local projects was decided on after considerable analysis of the various factors involved and serves as a guideline for evaluating local requests for Land and Water Conservation Fund grants. Since it is not the responsibility of the State to develop specific local plans and programs, this priority system allows flexibility in evaluating each project on an individual basis against other projects within the State. It will also assist counties and municipalities in developing long-range planning programs which are in conformance with the regional objectives delineated in the Statewide Plan.

Six factors are taken into consideration when evaluating each local request:

*A. The first factor takes into account the "percentage of population change" in the project's election district and is weighed in favor of the most rapidly urbanizing areas.

LOCAL PROJECT PRIORITY EVALUATION SYSTEM			
A. Percent of population change of election district			
Decrease	0 points	Total: 5 points	
0.0% - 24.9%	1 points		
25.0% - 49.9%	2 points		
50.0% - 74.9%	3 points		
75.0% - 99.9%	4 points		
100.0% - or greater	5 points		
B. Population Density by election district:			
0 - 99 persons/sq. mile	2 points	Total: 10 points	
100 - 499 persons/sq. mile	4 points		
500 - 999 persons/sq. mile	6 points		
1,000 - 9,999 persons/sq. mile	8 points		
10,000 - or more persons/sq. mile	10 points		
C. Rank of activity demand in region:			
1st	10 points	Total: 10 points	
2nd	9 points		
3rd	8 points		
4th	7 points		
5th	6 points		
6th	5 points		
7th	4 points		
8th	3 points		
9th	2 points		
10th	1 points		
lower than 10th	0 points		
D. Rank of region for activity demand:			
1st	10 points	Total: 10 points	
2nd	8 points		
3rd	6 points		
4th	4 points		
5th	2 points		
6th	0 points		
E. Meets one or more of the regional recommendations as identified in the State Outdoor Recreation and Open Space Plan			
		Total: 10 points	
F. Judgement			
		Total: 5 points	
For the purpose of evaluating local grant requests, a cut-off point of 15 points has been established.			

*B. The second factor, "population density by election District," is also weighed to favor the most densely populated areas.

**C. "Rank of activity demand in region" is based on the activity demand analysis explained in Chapter III. Points are assigned on the basis of the intensity of demand for the proposed activity within the region.

**D. "Rank of region for activity demand" also employs the activity demand studies done for this plan, and compares the rank of the proposed activity in the project's region with the activity's rank in the other regions of the State.

E. This factor provides additional weight to those projects which meet specific regional needs as identified in the appropriate section of Chapter VI.

F. A judgement score will be assigned by the State Project Officer responsible for reviewing and processing a local application. A score from "0" to "5" points may be applied to the judgement evaluation. When scoring the judgement, consideration should be given to the criteria listed below which best describe the type of project being rated.

- a. Will the project provide an outdoor recreation opportunity that is deficient within the Region?
- b. Is the project readily accessible to a population center that could easily utilize the project site?
- c. Does the project provide opportunities for outdoor recreation activities during all seasons of the year?
- d. Will the project increase the size of an existing open space area and/or an existing park?
- e. Will the project provide outdoor recreation opportunities for all age groups and sexes?
- f. Does the applicant have the capability through a government supported park and recreation department to acquire and/or develop the project in addition to providing the required day to day maintenance of the completed facility and to further operate the facility so that it will be inviting and useful to the general public?

ACTIVITY RANK BY REGION Annual Peak Season Demand — 1970						
	Western Maryland/ Frederick County	Baltimore	Suburban Washington	Southern Maryland	Upper Eastern Shore	Lower Eastern Shore
Attending Outdoor Concerts		5				
Attending Outdoor Sports						
Bicycling		10	10	6	8	7
Boating	8					
Camping	6	4	3	2	2	2
Driving for Pleasure	2		9	5	5	4
Fishing						
Hiking						
Horseback Riding	4			8	7	8
Hunting						
Ice Skating						
Nature Walks		7	5	3	4	5
Picnicking	5	2	2	9	9	9
Playing Outdoor Sports	3					
Sightseeing	7	9	7	4	3	3
Sledding & Tobogganing		6	6			
Snow Skiing	10					
Swimming Beach		8	8	1	1	1
Swimming Pool	9	3	4		10	
Walking for Pleasure	1	1	1	7	6	6
Water Skiing				10		10

- g. Will the project provide a substantial open space buffer and/or prevent the possibility of urban sprawl.

* Based on Figures obtained from **Maryland Population, 1930-1970**, Maryland Department of State Planning, August, 1971.

** A synopsis of activity demand ranking systems is shown.

REGIONAL RANK BY ACTIVITY Annual Peak Season Demand 1970*						
	Western Maryland/ Frederick County	Baltimore	Suburban Washington	Southern Maryland	Upper Eastern Shore	Lower Eastern Shore
Attending Outdoor Concerts	3	1	2	6	4	5
Attending Outdoor Sports	4	1	2	3	5	6
Bicycling	3	1	2	5+	4	5+
Boating	6	5	1	3	4	2
Camping	1	5	2	4	6	5
Driving for Pleasure	6	2	1	3	4	5
Fishing	1	5	2	6	4	3
Hiking	3	1	2	5	4	6
Horseback Riding	3	2	1	4	5	6
Hunting	1	5	6	4	2	3
Ice Skating	3	1	2	5	4	6
Nature Walks	3	1	2	5	4	6
Picknicking	3	2	1	4	5	6
Playing Outdoor Sports	3	1	2	6	4	5
Sightseeing	5	1	2	6	4	3
Sledding & Tobogganing	3	1	2	5	4	6
Snow Skiing	1	3	2	5	4	6
Swimming Beach	6	2	5	3	4	1
Swimming Pool	3	1	2	6	4	5
Walking for Pleasure	3	1	2	6	4	5
Water Skiing	6	1	5	3	4	2

+ Same total projected demand.
* 1990 Projections to be used temporarily until tables are developed for 1970 demands.

CONTINUING PLANNING PROGRAMS

PHASE III, THE ACTION PLAN

An essential tool for the implementation of this Comprehensive Open Space and Outdoor Recreation planning effort will be the development of Phase III, the Action Plan. As a logical outgrowth of the Concept Plan and the Comprehensive Plan, this important phase will represent the beginning of a continuing effort to provide up-to-date information and assessment of Maryland's open space and recreation needs. The Action Plan will:

- Provide an implementation program, including State and regional acquisition and development schedules.
- Propose work program outlines for special studies.
- Review current policies and criteria, including standards and responsibilities.
- Clarify the relationship of outdoor recreation and open space planning to other Statewide planning activities.
- Summarize the State Outdoor Recreation and Open Space Plan and process.

Completion of Phase III will provide the State and its jurisdictions with a functional tool for the planning, acquisition and development of future open space and outdoor recreation areas and facilities. It will encourage conformity to the Statewide and regional goals through review and coordination of 5-year Capital Budgets necessary for the receipt of State and Federal grants-in-aid.

CONTINUING STUDIES

In order to insure the implementation and continued relevance of the policies and recommendations set forth in the Comprehensive Plan, many special problem areas require additional research and study. Some of these have already been delineated in the chapter on Special Considerations, and general recommendations have been made. The Action Plan will provide suggested work programs for concentrated study in some of these areas. Many additional studies, which are either in progress, imminent, or recently completed will constitute valuable



inputs to the Plan's annual updating. Some of the most relevant are listed below.

State-wide Comprehensive Historic Preservation Plan — and inventory, analysis and plan for preserving places of historic interest and educational value. The Plan includes goals, criteria for site evaluation, and inventory maps by county. An historic forces study has been completed.

Wetlands Study — an inventory of wetlands, an analysis of problems and implications, the legal aspects of control and recommendations for preservation and improvement.

Detailed Studies & Plans for Specific Rivers — detailed plans and programs for implementing the recommendations of the Maryland Scenic Rivers Plan.

Watershed & Research Planning — activities oriented to small watersheds, comprehensive river basin water quality, and fish and wildlife protection are underway, and are being coordinated to maximize benefits and minimize costs of resource protection and development within watersheds.

Coastal Zone Research & Planning — actions to implement a coastal zone research plan to coordinate the many Federal research and information-gathering activities in the coastal zone, together with State and private research efforts. Also, programs are established setting objectives pertaining to commercial fishing production, shore erosion control, sport fishing, shoreline park recreation, recreational boating, waterfowl hunting, and water-quality control.

Comprehensive Coastal Zone Management Plan & Programs — a proposed plan and program to identify all formal State-Federal interfaces within coastal zone management, exert regulatory control over all engineering activity below mean high tide and over private wetlands above mean high tide, and provide explicit land use standards and criteria for use by local subdivisions in regulatory fast-land activities in the park.

Plan for Chesapeake Bay Area — a research and planning project to result in the preparation of a framework plan for Chesapeake Bay's development and use.

Power Plant Siting Plan — a plan and strategy for dealing with one of the key factors in coastal zone resource allocation.

Tourism Study — a tourism study is being conducted by the Department of Economic and Community Department to determine the magnitude of tourism in Maryland, its impact, and alternative ways to accommodate anticipated increases.

Maryland Soil & Water Conservation Needs Inventory — The State Soil Conservation Committee has completed a study of soil and water conservation needs to evaluate Federal and State public works projects.

Scenic Roads Study

A scenic roads study would have to be undertaken in close cooperation with the Maryland Department of Transportation and would be allied closely with the recreation and open space system established in the Phase II Comprehensive Plan. Scenic roads would be analyzed for their scenic potential, their beneficial relationships to nearby areas, and their desirability to accommodate scenic rest areas and overlooks.

Trail Study and Plan

This study would take into account existing and proposed trails, and would identify potential trail areas throughout the State. Along the trails, specific areas would be identified for preservation or special treatment, and land use policies would be established to assure that these areas are protected.



"He who knows what sweets and virtues are in the ground, the waters, the plants, the heavens, and how to come at these enchantments, is the rich and royal man."

Emerson



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Abstract: The Maryland Outdoor Recreation and Open Space Program is being undertaken in three phases. Phase I, the Concept Plan, dated June, 1970, provides a broad perspective of statewide and regional open space and recreation problems and potentials; and it presents general, long-range policies. The Concept Plan contains general policies as guidelines for recreation and open space decisions at all levels of government and private enterprise. This Phase II report, the Maryland Comprehensive Outdoor Recreation and Open Space Plan, identifies specific demands as well as policies and recommendations on the types and locations of open space and outdoor recreation areas needed throughout Maryland. The Comprehensive Plan's open space and outdoor recreation framework is identified and placed in an action-oriented perspective by indicating compatible recreation activities, implementation techniques that should be considered, the level of government that should implement each segment and an indication of those segments of the framework that warrant particular emphasis in future action. The third phase of the Maryland Outdoor Recreation and Open Space Program will provide an implementation program to carry out the policies and recommendations of the Comprehensive Plan. The Program is being undertaken in three separate phases because of the conviction that a Plan must be evolved rather than produced in one major effort.

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"The commitment of the people of Maryland to the cause of environmental quality is a commitment to the quality of life itself."

Governor Marvin Mandel



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